14-1513

Supreme Court, U.S.
FILED
JUN 22 2015
OFFICE OF THE CLERK

No. 14-

In the
Supreme Court of the United States

HALO ELECTRONICS, INC.,

Petitioner,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,

Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

CRAIG E. COUNTRYMAN
Counsel of Record
Fish & Richardson P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-5070
countryman@fr.com

MICHAEL J. KANE
WILLIAM R. WOODFORD
JOHN A. DRAGSETH
Fish & Richardson P.C.
3200 RBC Plaza
60 South Sixth Street
Minneapolis, MN 55402
(612) 335-5070

Counsel for Petitioner

QUESTIONS PRESENTED

1. Whether the Federal Circuit erred by applying a rigid, two-part test for enhancing patent infringement damages under 35 U.S.C. § 284, that is the same as the rigid, two-part test this Court rejected last term in *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014) for imposing attorney fees under the similarly-worded 35 U.S.C. § 285.

2. Whether the Federal Circuit erred by holding that a U.S. defendant does not "sell" or "offer to sell" the patented invention "within the United States" under 35 U.S.C. § 271(a), even though it enters a requirements contract with a U.S. customer that they negotiate and execute in the U.S., that is governed by California law, that specifies the material terms, and that creates legally binding obligations.

RULES 14.1(b) AND 29.6 STATEMENT

All parties are identified in the caption of this petition. No publicly held corporation owns 10% or more of Halo Electronics, Inc.

TABLE OF CONTENTS

Page

QUESTIONS PRESENTED i
RULES 14.1(b) AND 29.6 STATEMENT ii
TABLE OF AUTHORITIES v
OPINIONS BELOW 1
JURISDICTION 1
CONSTITUTIONAL, STATUTORY, AND REGULATORY PROVISIONS INVOLVED 1
INTRODUCTION 2
STATEMENT OF THE CASE 4
I. Pulse Copied Halo's Invention and Ignored Halo's Letters About the Patents-in-Suit. 4
II. Pulse Exploited Halo's Patented Technology by Selling to U.S. Customers Like Cisco. 7
III. The Proceedings Below. 8
A. The District Court. 8
B. The Federal Circuit. 10
REASONS FOR GRANTING THE PETITION 14
I. This Court Should Review the Federal Circuit's Section 284 Jurisprudence. 14
A. Federal Circuit Precedent Conflicts with the Statutory Text and *Octane* 14
B. The Proper Interpretation of § 284 Warrants Review Because of Its Important Consequences 19
C. This Case is a Good Vehicle to Return Enhanced Damages to the Text of § 284. 22
II. The Federal Circuit's Interpretation of § 271(a) Warrants Review. 24

TABLE OF CONTENTS—continued

Page

A. The Federal Circuit Misinterpreted the "Sells" and "Offers to Sell" Provisions of § 271(a). 24

B. The Proper Interpretation of § 271(a) is an Important Question That Has Previously Attracted this Court's Attention. 31

C. This Case is a Good Vehicle to Resolve the Proper Interpretation of § 271(a). 33

CONCLUSION 34

APPENDIX A: Federal Circuit Panel Opinion 1a

APPENDIX B: District Court Post-Trial Opinion on Willfulness and Other Issues 32a

APPENDIX C: District Court Summary Judgment Order on § 271(a) and Other Issues 67a

APPENDIX D: Federal Circuit Denial of Rehearing *En Banc* 137a

TABLE OF AUTHORITIES

Page(s)

Cases

3D Sys., Inc. v. Aarotech Labs., Inc.,
160 F.3d 1373 (Fed. Cir. 1998) 30, 31

Aro Mfg. Co. v. Convertible Top Replacement Co.,
377 U.S. 476 (1964) 16

Bartlett Springs Co. v. Standard Box Co.,
16 Cal. App. 671 (1911) 25

Brawley v. United States,
96 U.S. 168 (1877) 25

Commil USA, LLC v. Cisco Sys., Inc.,
135 S. Ct. 1920 (2015) 22

Cybiotronics, Ltd. v. Golden Source Elecs., Ltd.,
130 F. Supp. 2d 1152 (C.D. Cal. 2001) 32

Day v. Woodworth,
54 U.S. 363 (1851) 16

Dowling v. United States,
473 U.S. 207 (1985) 16

FieldTurf, Inc. v. Sw. Recreational Indus., Inc.,
235 F. Supp. 2d 708 (E.D. Ky. 2002) 33

Global Traffic Techs., LLC v. Morgan,
__ F. App'x __, 2015 WL 3513416
(Fed. Cir. June 4, 2015) 18, 23

Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.,
134 S. Ct. 1744 (2014) 10, 12

ION, Inc. v. Sercel, Inc.,
2010 WL 3768110 (E.D. Tex. Sept. 16, 2010) 32

Loughrin v. United States, 134 S. Ct. 2384 (2014) 28

MediaTek Inc. v. Freescale Semiconductor, Inc.,
2014 WL 580836 (N.D. Cal. Feb. 13, 2014) 32

Microsoft Corp. v. i4i Ltd. P'ship,
131 S. Ct. 2238 (2011) 22

Norfolk & W. Ry. Co. v. Sims,
191 U.S. 441 (1903) 24, 27, 28, 31

Octane Fitness, LLC v. ICON Health & Fitness, Inc.,
134 S. Ct. 1749 (2014) ..... *passim*

Prof'l Real Estate Inv'rs, Inc. v. Columbia Pictures Indus.,
508 U.S. 49 (1993) 11

Quality Tubing, Inc. v. Precision Tube Holdings Corp.,
75 F. Supp. 2d 613 (S.D. Tex. 1999) 32

Safeco Ins. Co. of Am. v. Burr,
127 S. Ct. 2201 (2007) 19

In re Seagate Tech., LLC,
497 F.3d 1360 (Fed. Cir. 2007) (en banc) ..... *passim*

Semiconductor Energy Lab. Co. v. Chi Mei Optoelectronics Corp.,
531 F. Supp. 2d 1084 (N.D. Cal. 2007) 32

Seymour v. McCormick,
57 U.S. 480 (1853) 16

Stryker Corp. v. Zimmer, Inc.,
596 F. App'x 924 (Fed. Cir. 2015) 23

Stryker Corp. v. Zimmer, Inc.,
782 F.3d 649 (Fed. Cir. 2015) 18

Teese v. Huntingdon,
64 U.S. 2 (1860) 15, 18

Tilghman v. Proctor,
125 U.S. 136 (1888) 15

Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.,
617 F.3d 1296 (Fed. Cir. 2010) ..... *passim*

United States v. Castleman,
134 S. Ct. 1405, 1410 (2014) 27

Wesley Jessen Corp. v. Bausch & Lomb, Inc.,
256 F Supp. 2d 228 (D. Del. 2003) 32

Wing Shing Prods. (BVI), Ltd. v. Simatelex Manufactory Co.,
479 F Supp. 2d 388 (S.D.N.Y. 2007) 32

U.S. Constitution and Statutes

U.S. CONST. Art. I, § 8, cl. 8 19

35 U.S.C. § 103 20

35 U.S.C § 271 ..... *passim*

35 U.S.C. § 282 21

35 U.S.C. § 284 ..... *passim*

35 U.S.C. § 285 ..... *passim*

Patent Act of 1836, ch. 357, 5 Stat. 117 (1836) 15

Patent Act of 1870, ch. 230, § 59, 16 Stat. 198, 207 (1870) 15

UNIFORM COMMERCIAL CODE § 2-306 (West 1963) 26

Regulations

48 C.F.R. § 16.503 26

Legislation History

S. Rep. No. 79-1503, at 2 (1946) 19, 21

Other Authorities

AIPLA 2013 Report of the Economic Survey, *available at* http://bit.ly/1yF9L9h 21

BLACK'S LAW DICTIONARY (7th Ed. 1999) 25

ANDREA LUNSFORD & ROBERT CONNORS, THE ST. MARTINS HANDBOOK (3d ed. 1995) 30

Anthony Breitzman & Diana Hicks, ANALYSIS OF SMALL BUSINESS PATENTS BY INDUSTRY AND FIRM SIZE (Nov. 2008), *available at* http://bit.ly/1LoJZwL 21

1 A. CORBIN, CONTRACTS (1963) 25

HENRY J. FRIENDLY, FEDERAL JURISDICTION: A GENERAL VIEW (1973) 20

1 S. WILLISTON, LAW OF CONTRACTS (3d ed. 1957) 26

PETITION FOR A WRIT OF CERTIORARI

Halo Electronics, Inc. respectfully petitions for a writ of *certiorari* to review the judgment below.

OPINIONS BELOW

The court of appeals affirmed the judgment, (App., *infra*, 1a-31a), as reported at 769 F.3d 1371 (Fed. Cir. 2014), and denied rehearing *en banc* (App., *infra*, 137a-154a), as reported at 780 F.3d 1357 (Fed. Cir. 2015). The district court's opinions, (App. 32a-136a), are reported at 810 F. Supp. 2d 1173 (D. Nev. 2011) and 2013 WL 2319145 (D. Nev. May 28, 2013).

JURISDICTION

The Federal Circuit denied rehearing on March 23, 2015. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL, STATUTORY, AND REGULATORY PROVISIONS INVOLVED

35 U.S.C. § 284 provides in relevant part:

> Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement. . . . [T]he court may increase the damages up to three times the amount found or assessed.

35 U.S.C § 271(a) provides in relevant part:

> Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

INTRODUCTION

This patent case presents two issues for which the Federal Circuit has, once again, adopted a rigid rule that conflicts with the statutory text.

The first issue involves enhanced damages under 35 U.S.C. § 284, a provision that parallels the one for attorney fees under 35 U.S.C. § 285. Both provisions are general and flexible, simply saying, respectively, that a court "may increase damages," or "may award reasonable attorney fees to the prevailing party" in "exceptional cases." Until last year, when this Court decided *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), the Federal Circuit applied the same rigid two-part test to both provisions, which required that a party (i) had no objectively reasonable basis for its position and (ii) acted in subjective bad faith. Despite this Court rejecting that rigid test for § 285 in *Octane* (calling the Federal Circuit test an "inflexible framework" for "inherently flexible" statutory text), the Federal Circuit in this case refused to adjust its § 284 law accordingly. Two judges recognized the problem and urged *en banc* rehearing to align with *Octane*. But the full Federal Circuit refused. As a result, district courts are now unable to impose enhanced damages if a defendant presents a non-frivolous defense, even if it acted in bad faith before the suit by copying the patentee's product, ignoring offers to license, and failing to investigate or develop any pre-suit defense. Nothing in the statutory text justifies this ridiculous result, and *Octane* suggests just the opposite.

The second issue involves 35 U.S.C. § 271(a), which makes liable for infringement a defendant who "offers to sell, or sells any patented invention, within the United States." The term "sells" has a well-

established common law meaning that includes forming a contract that sets material terms, *i.e.*, price and quantity. Yet the Federal Circuit held that a requirements contract that specifies part numbers and prices, allocates a percentage of the future demand between the U.S. defendant (Pulse) and its U.S. customer (Cisco), is negotiated and executed in the United States, and is governed by California law, is not an infringing sale under § 271(a). The Federal Circuit thought these contracts "did not constitute a firm agreement to buy and sell, binding on both Cisco and Pulse," (App. 15a), even though requirements contracts have been enforceable for over a century.

The Federal Circuit compounded its error by finding no "*offer* to sell ... within the United States" either, even though the defendant's U.S. employee made offers to its customer's U.S. employee that the defendant's President admitted it would be bound to honor. Applying *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1309 (Fed. Cir. 2010), the Federal Circuit erroneously determined that not only must the offer be in the U.S., but that delivery must be too.

Transocean runs contrary to the statutory text, which requires only an "offer" in the U.S. It will also have a devastating impact on U.S. patentees by allowing infringers to conduct sales activities in the U.S. but avoid liability through creative contracting. This Court came close to reviewing *Transocean* itself, asking for the Solicitor General's views on whether to grant *certiorari* there, only to have that case settle. This case is the perfect vehicle to take up the question. A group of professors who supported *certiorari* in *Transocean* correctly called the result here "perplexing." This Court's review is warranted.

STATEMENT OF THE CASE

I. Pulse Copied Halo's Invention and Ignored Halo's Letters About the Patents-in-Suit.

1. Halo is a family business with about 15 employees. (A1087-99 (all A__ cites are to the Court of Appeals appendix).) Halo's main products are small electrical components called surface mount transformers. (A1099-1103, A1439-42.) These transformers are affixed to printed circuit boards and incorporated into computers, routers, and many other consumer products. (*Id.*)

This suit concerns Halo's patents covering the unique "open construction" packaging of its transformers. The patented technology solved a problem that had plagued the industry. (A1121-23, A1460-68, A3376.) The packages of surface mount transformers would often crack and fail because of high temperatures during the process of soldering the transformers to a circuit board, which imposed enormous costs on customers. (*Id.*) Others had tried and failed for years to solve the problem before Halo. (*Id.*)

Halo began work in late 1993 and spent months perfecting its patented design. (A1307-28, A1125-37, A1868-72.) When Halo introduced the new product to customers, they were initially skeptical it would work. (A1150-52; A1956-57.) But the product's superior performance eventually overcame these worries, and, by 1997, Halo's annual sales of it increased to $5 million. (A7736; A1153-54.) Halo's customers for the patented products included Cisco, Motorola, Siemens, and GE. (A1103-04, A1942-43.)

2. Pulse, a company with about 10,000 employees, had been trying to solve the cracking problem for years before Halo's founding. Pulse introduced a va-

riety of designs starting in the mid-1980s that attempted to solve the problem, and it promoted them through at least August 1997, when Halo's first patent issued, publicly disclosing the Halo design to competitors. (A6035-42; A6043-48 at 1:57-2:3, Figs. 1 & 5; A6280-84 at 1:33-43, 3:35-36; A3377-78; A3391-92.) Pulse's publications from the early 1990s criticized a design element that would become crucial to Halo's patented solution and touted that Pulse had eliminated that element. (*Id.*) Yet Pulse's efforts failed. Its employees admitted that its old transformers "will crack during the reflow process" for soldering them to circuit boards, described this as a "typical failure," and believed that "this is a killer for us." (A6285-89.)

So Pulse copied Halo's invention. A Pulse engineer learned about Halo's design in 1998 when he saw Halo's first patent. (A2241, A2865-66.) That same year, Pulse introduced its first products with the exact construction disclosed in Halo's patents, with the very element it had been criticizing for years. (A2063.) Once Pulse adopted the Halo design, its sales of infringing products soon dwarfed Halo's, increasing to $16 million by 2002. (A7740.) Yet, during that time, Pulse never did anything to investigate its liability for infringement, even though others at Pulse, including lawyers and marketing employees, kept seeing Halo's patents. (A2241, A2865-68.)

Much-smaller Halo had a difficult time trying to enforce its patents. It sent Pulse two mid-2002 invitations to negotiate a license. (A5953; A5954.) Pulse never responded. Yet, despite ignoring Halo, Pulse had no subjective belief that it had a defense—its corporate representative later admitted that "I'm not aware of anyone in the company that I know of that

made a conscious decision" on the issue. (A2245; A2864.) It appears that Pulse was counting on the fact that Halo couldn't afford to bring suit. And, for a time, Pulse was right—Halo's financial pressures (and the terminal illness of its President's wife) prevented it from filing this suit until 2007. (App. 60a.)

In the meantime, Pulse took full advantage. Pulse expanded its sales of infringing products to $39 million a year by 2007, and it never tried to avoid infringement. (A7740; A2033; A2433.) Things got worse after Halo sued. A 2008 Pulse email admitted it was now trying to design "all" new products using Halo's "open" construction. (A6185-87.) A 2009 Pulse marketing presentation went even further, explaining that not only would "all" new products use Halo's "open" construction, rather than Pulse's old, inferior design, but that the plan was to "convert" any old models still remaining to Halo's "open" construction to comply with new industry standards for lead-free products that required even higher temperatures during the soldering process. (A6151.)

When called to explain its actions at trial, Pulse pointed only to an engineer who said that he reviewed Halo's patents in 2002 and concluded they were invalid. (A2424-15.) But Pulse's corporate representative admitted this investigation was "cursory." (A2863-64.) And another Pulse engineer admitted that the prior products his colleague had relied upon were "irrelevant" to Halo's invention. (A3112; A2409.) Even worse, the Pulse engineer who supposedly reviewed Halo's patents was unfamiliar with the relevant law and did not rely on legal advice from anyone else in analyzing validity. (A2424-27, A2411.) Not surprisingly, no decision-maker in the company actually relied on his analysis. (A2864.)

II. Pulse Exploited Halo's Patented Technology by Selling to U.S. Customers Like Cisco.

Pulse has taken sales from Halo at a number of their common U.S. customers, especially Cisco. (A2150-51.) We provide some background on these transactions, using Cisco as a representative example, to show the offers and sales occurred in the U.S.

Pulse sells transformers to Cisco that are incorporated into Cisco's end-products (e.g., routers and other computer networking equipment). Cisco will not buy a Pulse transformer until it first pre-approves the part for use. (A15092-94, A15003, A1947-49, A15083.) Pulse obtains that pre-approval by having its U.S. employees work with Cisco's U.S. engineers to ensure the product matches Cisco's size and electrical requirements and by sending samples to Cisco for testing. (*Id.*)

Pulse's negotiates and executes its sales contracts with Cisco entirely in the United States. These U.S. contracts are formed quarterly and set a binding price for each part and a quantity as a percentage of Cisco's requirements. The quarterly negotiation process begins when a Cisco U.S. employee sends Pulse a "Request for Quote" that solicits bids for all pre-approved Pulse products. (A15047-52; A15070; A15072-79.) A Pulse U.S. employee responds by offering to sell a minimum quantity of those parts to Cisco and stating a particular price. (*Id.*) Pulse's President admitted that this is a binding offer, testifying that "when we submit that price, we're agreeing, if Cisco orders that number of parts, we will give them that price." (A15443-44.) Cisco accepts the offer by responding with a final price for each part and percentage allocation for Pulse of Cisco's requirements for the quarter. (A15047-52;

A15096-97; A15098-124.) A master purchase agreement between Pulse and Cisco is governed by California law and sets further "binding" terms for "all purchases made by Cisco or on our behalf by our contract manufacturers," including terms on capacity, timing, and "lowest price warranties." (A15135; A15056-57.)

Though the offer for sale and sale occur wholly in the U.S., the delivery of the products occurs wholly outside the U.S. Cisco communicates the contract price and allocation to its manufacturers, who assemble Cisco's end products. (A15045-47, A15053; A15127.) Pulse sends the infringing products from its warehouses in Asia to Cisco's manufacturers (who are also in Asia), and the manufacturer pays Pulse. (A15127-29, A15138-49.) Cisco reimburses its manufacturer after receiving an invoice that includes the cost of all components used to build the Cisco end-product, including Pulse's products. (A15045, A15054; A15150-253; A15254-339; A15392-93.)

The price and quantity agreed upon by Pulse and Cisco through the master purchase agreement and quarterly contracts strictly controls the transaction. (*See, e.g.*, A15053-56, A15063-64, A15127, A15128-32, A15138-49, A15825, A15458, A15463, A15472, A15836.; A15189; A15293; A15388; A15576; A15085-88; A15991.) Cisco's manufacturers are not free to deviate from them, and Cisco has rebuked manufacturers who have tried to deviate. (A15130-32, A15449, A15055.)

III. The Proceedings Below.

A. The District Court.

1. Halo brought this suit in March 2007 to stop Pulse's infringement of U.S. Patents 5,656,985;

6,297,720; and 6,344,785. Halo alleged that Pulse infringed under 35 U.S.C. § 271(a) by (i) shipping patented products into the U.S. and (ii) offering to sell and selling products to Cisco and other U.S. customers with the U.S. contracts described above. Halo also alleged that Pulse induced infringement under 35 U.S.C. § 271(b) by encouraging non-U.S. customers to import end products containing Pulse's infringing products into the U.S. Halo further alleged that Pulse's infringement was willful and sought enhanced damages under 35 U.S.C. § 284. (A294-95.)

Before trial, the district court granted summary judgment that Pulse's sales to Cisco did not infringe under § 271(a). The court reasoned that, "[a]lthough Halo has presented evidence indicating that pricing discussions took place between Pulse and its customers in the United States," the products were not "shipped" into the United States. (App. 129a-130a.) It also granted summary judgment, without explanation, that there was no offer for sale to Cisco in the U.S. (*Id.*) The district court's judgment excluded the vast majority of Pulse's U.S. sales from trial.

2. The parties went to trial on Halo's claim of infringement under § 271(a) for products Pulse shipped into the United States and inducement under § 271(b). The jury sided with Halo, finding the patents valid and infringed, and awarded $1.5 million.

The jury also found by clear and convincing evidence that Pulse's infringement was willful. (A233.) The instructions told the jury that, to find willfulness, it would have to conclude that "Pulse acted with reckless disregard" of Halo's patents, *i.e.*, "that Pulse actually knew, or it was so obvious that Pulse should have known, that Pulse's actions constituted infringement of a valid patent." (A210.) The jury

was also told to consider "whether Pulse acted in a manner consistent with the standards of commerce for its industry." (*Id.*) The jury thus found that Pulse acted in bad faith and inconsistently with those standards of commerce.

Nevertheless, the district court set aside the willfulness finding after trial. Federal Circuit precedent permits a finding of willfulness only if the defendant (1) "acted despite an objectively high likelihood that its actions constituted infringement of a valid patent," and (2) "this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer." *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371-72 (Fed. Cir. 2007) (en banc). The jury's finding, which Pulse never challenged in a Rule 50 motion, dealt with the second prong. The district court, however, concluded the first prong was not met because Pulse presented an invalidity defense at trial that "was not objectively baseless, or a sham." (App. 64a.)

B. The Federal Circuit.

1. A Federal Circuit panel affirmed the conclusion of no willful infringement, agreeing that the first prong of its *Seagate* test was not met because "Pulse did raise a substantial question as to the obviousness of the Halo patents." (App. 21a.)

Nevertheless, Judges O'Malley and Hughes issued a concurrence explaining that, although existing Federal Circuit precedent compelled that result, that precedent conflicted with this Court's intervening decisions in *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014) and *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct.

1744 (2014), and the text of the governing statutory provision, 35 U.S.C. § 284. (App. 25a-31a.)

They began by noting that the *Seagate* test for enhanced damages under 35 U.S.C. § 284 is "analogous" to the Federal Circuit's now-rejected test for attorney fees under § 285:

> Our current two-prong, objective/subjective test for willful infringement set out in [*Seagate*] is analogous to the test this court prescribed for the award of attorneys' fees under § 285 in *Brooks Furniture Manufacturing, Inc. v. Dutailier International, Inc.*, 393 F.3d 1378, 1381–82 (Fed. Cir. 2005), *overruled by Octane Fitness*, 134 S. Ct. at 1757–58. The parallel between our tests for these two issues is not surprising. Both enhanced damages and attorneys' fees are authorized under similar provisions in title 35 of the United States Code (the Patent Act of 1952).

(App. 26a.) The concurring judges added that both tests "were predicated on our interpretation of the Supreme Court's decision in *Professional Real Estate Investors, Inc. v. Columbia Pictures Industries. ("PRE")*, 508 U.S. 49 (1993), which we believed required a two-step objective subjective inquiry before either enhanced damages or attorneys' fees could be awarded." (App. 27a.)

The concurring judges then urged their colleagues to reconsider *en banc* their willfulness test because "[t]he Supreme Court has now told us that our reading of *PRE* was wrong." (App. 27a.) They explained that nothing in the text of the enhanced damages provision of § 284 supports application of the rigid, two-prong *PRE* test, just as this Court de-

termined in *Octane* that nothing in § 285 justified use of the two-prong test for attorney fees:

> Because we now know that we were reading *PRE* too broadly, and have been told to focus on the governing statutory authorization to determine what standards should govern an award of attorneys' fees, we should reconsider whether those same interpretative errors have led us astray in our application of the authority granted to district courts under § 284. Just as "the *PRE* standard finds no roots in the text of § 285," [*Octane*, 134 S. Ct. at 1757-58], there is nothing in the text of § 284 that justifies the use of the *PRE* narrow standard. In rejecting the rigid two-prong, subjective/objective test for § 285 under *Brooks Furniture*, the Supreme Court told us to employ a flexible totality of the circumstances test. *Id.* at 1756. We should now assess whether a similar flexible test is appropriate for an award of enhanced damages.

(App. 28a.) They also urged *en banc* reconsideration of several other aspects of willfulness jurisprudence in light of *Octane* and *Highmark*. (App. 28a-31a.)

Taking their suggestion, Halo sought rehearing *en banc*, but the Federal Circuit denied the request. (App. 138a-139a.) Two judges wrote separately to note that, although there were several questions surrounding § 284 that might someday warrant *en banc* review, they understood Halo's petition to be raising only a narrower issue that did not have the necessary "general importance." (App. 140a-145a.) But Halo's petition had implicated those questions, specifically noting that the panel's decision was inconsistent with the text of § 284, *Octane*, and *Highmark*.

Judges O'Malley and Hughes dissented. (App. 146a-154a.) They reiterated their prior points, and added that their court has "require[d] that an evidentiary wall be erected between the objective and subjective portions of the inquiry." (App. 148a.) This wall "preclude[s] considerations of subjective bad faith—no matter how egregious—from informing our inquiry," of the "objective" prong. (*Id.*)

2. The Federal Circuit also affirmed the summary judgment that Pulse's offers for sale and sales to Cisco and similar customers did not infringe under § 271(a). The panel concluded there was no "sale" within the United States because the requirements contracts between Pulse and Cisco setting price and allocation supposedly "did not constitute a firm agreement to buy and sell, binding on both Cisco and Pulse," (App. 15a), even though requirements contracts have been enforceable outside patent law for over a century. The panel thus declined to decide if a binding U.S. contract constitutes a "sale within the United States" under § 271(a). (App. 15a n.1.)

The panel then concluded that Pulse did not make any "offer for sale" to Cisco in the United States because, under circuit precedent, "the location of the contemplated sale controls whether there is an offer to sell *within the United States*." (App. 18a, *citing Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1309 (Fed. Cir. 2010).) Because it had previously concluded that Pulse was not making U.S. sales to Cisco, the panel thought that Pulse's "offers for sale" to Cisco also were not in the U.S., even though a Pulse U.S. employee made the offers to a Cisco U.S. employee when both were in the U.S. (App. 18a-19a.)

REASONS FOR GRANTING THE PETITION

I. This Court Should Review the Federal Circuit's Section 284 Jurisprudence.

A. Federal Circuit Precedent Conflicts with the Statutory Text and *Octane*.

The Federal Circuit's enhanced damages jurisprudence conflicts with the statutory text, statutory purpose, and this Court's precedent. The statutory text says, without qualification, that "the court may increase the damages up to three times the amount found or assessed." 35 U.S.C. § 284. Yet, despite this broad language, the Federal Circuit has grafted a willfulness requirement onto the statute. *Seagate*, 497 F.3d at 1368 ("Absent a statutory guide, we have held that an award of enhanced damages requires a showing of willful infringement."). It has then stacked on an additional requirement not in the statute, *i.e.*, that willfulness can be proven only under the same rigid two-part objective/subject test that this Court rejected in *Octane* for the similarly flexible § 285. *Seagate*, 497 F.3d at 1371. As a result, the district court here had no discretion to enhance damages to punish Pulse's bad faith infringement simply because its trial lawyers presented a non-sham defense. This Court should grant review to eliminate the Federal Circuit's unsupported artifice.

1. The text of § 284 does not restrict district courts to enhancing damages only on a finding of "willful" infringement. The *Seagate* majority itself acknowledged the problem, noting that it was imposing the willfulness requirement "*absent a statutory guide*." *Seagate*, 497 F.3d at 1368. That was error. As two concurring judges explained, "the language of

the statute unambiguously omits any such requirement" and "there is no principled reason for continuing to engraft a willfulness requirement onto section 284." *Seagate*, 497 F.3d at 1377 (Gajarsa, J., concurring).

The Federal Circuit's approach conflicts not only with the statutory text, but also with this Court's precedent. Section 284 carried over analogous enhanced damages provisions of the Patent Acts of 1836 and 1870. *See* Patent Act of 1836, ch. 357, 5 Stat. 117 (1836) ("[I]t shall be in the power of the court to render judgment for any sum above the amount found by such verdict . . . not exceeding three times the amount thereof, according to the circumstances of the case"); Patent Act of 1870, ch. 230, § 59, 16 Stat. 198, 207 (1870) ("[T]he court may enter judgment thereon for any sum above the amount found by the verdict as the actual damages sustained, according to the circumstances of the case, not exceeding three times the amount of such verdict, together with the costs."). This Court understood those broadly worded predecessor provisions to give district courts wide latitude to enhance damages whenever the case appeared to require it:

- *Tilghman v. Proctor*, 125 U.S. 136, 143-44 (1888) ("[T]he court may, *whenever the circumstances of the case appear to require it*, inflict vindictive or punitive damages, by rendering judgment for not more than thrice the amount of the verdict.");
- *Teese v. Huntingdon*, 64 U.S. 2, 9 (1860) ("[I]f, in the opinion of the court, the defendant *has not acted in good faith, or has caused unnecessary expense and injury to the plaintiff*, the court may render judgment for a

larger sum, not exceeding three times the amount of the verdict.");

- *Seymour v. McCormick*, 57 U.S. 480, 488-89 (1853) ("The power to inflict vindictive or punitive damages is *committed to the discretion and judgment of the court* within the limit of trebling the actual damages found by the jury.");
- *Day v. Woodworth*, 54 U.S. 363, 372 (1851) ("[I]f, in the opinion of the court, the defendant has not acted in good faith, or has been stubbornly litigious, or has caused unnecessary expense and trouble to the plaintiff, the court may increase the amount of the verdict, to the extent of trebling it.").

Far from limiting enhanced damages to instances of willful infringement, these cases recognize a defendant's failure to act in good faith as one of several circumstances that might justify enhancement.

The Federal Circuit's contrary approach is based on a misreading of other case law from this Court. In particular, *Seagate* cited cases in which this Court remarked in passing that willful infringement would justify enhancing damages. *See Seagate*, 497 F.3d at 1368 (citing *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964); *Dowling v. United States*, 473 U.S. 207, 227 n.19 (1985); *Seymour v. McCormick*, 57 U.S. 480, 489 (1853)). But, as the concurring opinion in *Seagate* explained, those cases "do not hold that a finding of willfulness is *necessary* to support an award of enhanced damages," but, at most, "stand for the uncontroversial proposition that a finding of willfulness is *sufficient* to support an award of enhanced damages."

Id. at 1381 (Gajarsa, J., concurring) (emphasis in original). They are thus fully consistent with this Court's century and a half of precedent interpreting § 284 and its predecessors to give district courts broad discretion to determine when enhancement is appropriate.

2. The Federal Circuit has taken the inquiry even further away from the statutory text and this Court's precedent in defining "willful infringement." It has held that an infringer's subjective bad faith is insufficient, standing alone, to show willfulness. Instead, it has equated willfulness with "objective recklessness," required a threshold showing "that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent," and added that "[t]he state of mind of the accused infringer is not relevant to this objective inquiry." *Seagate*, 497 F.3d at 1371. Only if this "objective" prong is met will the Federal Circuit allow district courts to consider the infringer's subjective state of mind and find willfulness. That cannot be right.

For one thing, as Judge O'Malley explained, this is the same, "overly rigid" two-part inquiry that *Octane* rejected as the standard for awarding attorney fees under 35 U.S.C. § 285. (App. 26a-28a.) *Octane* rejected that two-part test because it "superimposes an inflexible framework onto statutory text that is inherently flexible," has "no roots in the text of § 285," and "is so demanding that it would appear to render § 285 largely superfluous." *Octane*, 134 S. Ct. at 1756-58. The same is true here. Section 284, like § 285, is a flexible provision that imposes no mechanical prohibitions on when district courts can enhance damages. In fact, § 284 is even more flexible than

§ 285, because § 284's text imposes no limits on the district court's discretion to enhance damages, while § 285 restricts fee-shifting to "exceptional" cases. Yet the Federal Circuit has interpreted § 284 so narrowly that it forbids district courts from enhancing damages even in cases of bad faith infringement, so long as the defendant presents a non-sham trial defense, rendering § 284 "largely superfluous." This case is one example. Other subsequent cases have applied the same rigid rule. *See, e.g.*, *Stryker Corp. v. Zimmer, Inc.*, 782 F.3d 649, 660-62 (Fed. Cir. 2015); *Global Traffic Techs., LLC v. Morgan*, __ F. App'x __, 2015 WL 3513416, at *7-8 (Fed. Cir. June 4, 2015).

For another thing, the Federal Circuit's rigid two-part test precludes enhanced damages in cases where this Court has said they are permissible. For example, *Aro* observed that a patentee "could in a case of willful *or bad-faith infringement* recover punitive or 'increased' damages under the statute's trebling provision." *Aro*, 377 U.S. 508 (emphasis added). Likewise, the cases cited above at pp. 15-16 permitted enhancing damages if the defendant "has not acted in good faith, or has caused unnecessary expense and injury to the plaintiff." *Teese*, 64 U.S. at 9. These cases show that bad faith infringement is an independent basis for enhancing damages under § 284, regardless of what defenses a hypothetical, objective observer might concoct after the fact. Yet the Federal Circuit's rigid test currently precludes enhancement based on bad faith alone.

What is more, the Federal Circuit was wrong to limit the concept of "willful infringement" to only "objectively reckless" conduct. A defendant who infringes in bad faith is a willful infringer. Although this Court has, in other contexts, extended the term "will-

fully" to include an actor who behaves in an "objectively reckless" manner, *Safeco Ins. Co. of Am. v. Burr*, 127 S. Ct. 2201, 2215 (2007), this does not suggest that someone who purposely acts in bad faith (and is thus even more culpable) is not also still guilty of acting "willfully." The Federal Circuit has thus adopted a test with the odd effect of letting defendants like Pulse, who act with the worst intent (bad faith), escape scot-free. That cannot be right, because the purpose of § 284 is to deter defendants from acting improperly. *See, e.g.*, S. Rep. No. 79-1503, at 2 (1946) ("[T]he present discretion to award triple damages, will discourage infringement of a patent by anyone thinking that all he would be required to pay if he loses the suit would be a royalty.").

B. The Proper Interpretation of § 284 Warrants Review Because of Its Important Consequences.

The Federal Circuit's departure from the text of § 284 is important enough to warrant this Court's attention for multiple reasons.

First, the Federal Circuit's rule negatively impacts a large category of cases—*i.e.*, suits where one competitor has appropriated its rival's patented technology. Competitor cases are the very types of cases where robust patent protection is needed. Patents "promote the progress of science and the useful arts," by permitting inventors a period of exclusivity to recoup their investment in bringing new technology to market. U.S. CONST. Art. I, § 8, cl. 8. If one competitor can intentionally copy another's patented technology with impunity, firms will be reluctant to invest the resources to solve seemingly intractable problems, like the problem Halo solved after years of

failure by Pulse and others. The Federal Circuit's rule permits such copying to go unpunished, so long as the infringer can conjure a non-frivolous trial defense. The only downside for an infringer is the payment of the same royalty that it would have paid had it acted in good faith.

Under the Federal Circuit's rigid standard, nearly every infringer can concoct a defense. The easiest approach is the one Pulse took here—arguing the patent is invalid as obvious under 35 U.S.C. § 103 by using the advantage of hindsight to locate and combine bits and pieces from prior publications to yield the invention. It is difficult for district courts to say that such a defense is a "sham" or "baseless" because it will turn on technical issues and expert testimony of notorious complexity. Even one of this Nation's finest judges has remarked on how challenging patent cases are, explaining that the technical issues are often "quite beyond the ability of the usual judge to understand without the expenditure of an inordinate amount of educational effort by counsel and of attempted self-education by the judge, and in many instances, even with it." *See* HENRY J. FRIENDLY, FEDERAL JURISDICTION: A GENERAL VIEW 156-57 (1973). As a result, the Federal Circuit's rule renders § 284 "largely superfluous," *Octane*, 134 S. Ct. at 1758, as most judges will find the technical issues too murky to say a defense is a sham.

Second, and relatedly, the Federal Circuit's rule is a particular threat to small businesses like Halo. Patents are the most valuable assets that many small businesses possess—they are often started with a valuable idea and little else. Yet the high cost of patent litigation makes it challenging for small businesses to enforce their patent rights effectively.

See, e.g., AIPLA 2013 Report of the Economic Survey, *available at* http://bit.ly/1yF9L9h (reporting patent litigation costs an average of $970K-$5.9 million, depending on the amount in controversy). They need § 284's enhanced damages provision to deter their larger competitors from stealing their ideas, just as Congress intended. *See, e.g.*, S. Rep. No. 79-1503, at 2 (1946) ("[T]he present discretion to award triple damages, will discourage infringement of a patent by anyone thinking that all he would be required to pay if he loses the suit would be a royalty."). But the Federal Circuit's rigid rule has disconnected § 284 from its deterrent purpose—larger competitors are now free to copy a patented product, undercut the smaller patentee's prices, and know that the cost of litigation will make it difficult for the patentee to fight back. If the patentee can ultimately muster the resources to file suit, the defendant need only concoct a non-sham defense to eliminate any risk its bad faith actions will be punished. The current rule will deter small businesses from investing in technology. That ultimately harms consumers because, as a study commissioned by the Small Business Administration found, "small firms are much more likely to develop emerging technologies than are large firms." Anthony Breitzman & Diana Hicks, ANALYSIS OF SMALL BUSINESS PATENTS BY INDUSTRY AND FIRM SIZE (Nov. 2008), *available at* http://bit.ly/1LoJZwL.

Third, the Federal Circuit's approach conflicts with the statutory presumption of validity. *See* 35 U.S.C. § 282(a) ("A patent shall be presumed valid."). The Federal Circuit's rigid framework allows infringers to presume a known patent is *in*valid and do nothing to avoid infringement, knowing that they can conjure up a non-frivolous obviousness defense later to inoculate themselves from enhanced damag-

es. That turns the statute on its head. A district court should have discretion to enhance damages where the defendant copies the patent, ignores the patentee's attempts to license, yet does nothing to seriously investigate the patent's validity despite the statutory presumption in § 282. Yet the Federal Circuit's current framework denies district courts that discretion. This Court has vigorously defended the presumption of validity in other cases. *Microsoft Corp. v. i4i Ltd. P'ship*, 131 S. Ct. 2238 (2011); *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1928-29 (2015). It should do so again here.

C. This Case is a Good Vehicle to Return Enhanced Damages to the Text of § 284.

This case is an excellent vehicle to fix the Federal Circuit's erroneous interpretation of § 284. It is the poster child for a major problem with the Federal Circuit's current test—*i.e.*, a defendant can act in bad faith before the suit is filed but automatically escape enhanced damages if, years later, its trial lawyers concoct a non-frivolous defense for litigation. Here, Pulse's pre-suit actions were the epitome of bad faith: Pulse copied Halo's patented products, spurned Halo's attempts to discuss a license, conducted only a "cursory" investigation into the patent, and never made a "conscious decision" that it had a right to do what it was doing. (*See* pp. 4-6 above.) Pulse was banking on the fact it could get away with bad faith infringement because Halo was too small to defend itself. Pulse has been right so far, because the district court didn't have the option to enhance damages. But a proper interpretation of § 284's text would give the district court that option. The court should at least have had discretion to balance Pulse's bad faith pre-suit conduct against whatever post-suit

defenses it concocted. Instead, the mere existence of a non-frivolous defense was the end of the story.

There is no reason to wait for another case to bring enhanced damages jurisprudence back to the text of § 284. The Federal Circuit has made it quite clear that it will not fix this problem itself. It denied rehearing *en banc* in this case, despite a forceful dissent from Judges O'Malley and Hughes, who correctly recognized that their court's test is a rigid artifice with no basis in § 284's text—just like the artifice this Court rejected in *Octane* for § 285. (App. 26a-28a.) Although two other judges expressed interest in these issues, they wrongly thought that Halo had not raised them or framed the issue so it was of sufficiently general importance. (App. 140a-145a.) But Halo has sought enhanced damages from the very beginning of this case, (A294-95), and its *en banc* petition had specifically noted that current § 284 jurisprudence conflicts with the statutory text and *Octane*. So the issue in this petition was squarely presented below. And, lest there be any doubt about whether the Federal Circuit intends to revisit these issues itself, that court denied rehearing *en banc* in another case on the same day as this one that also presented these same issues. *Stryker Corp. v. Zimmer, Inc.*, 596 F. App'x 924 (Fed. Cir. 2015). It has also continued to apply that rule in subsequent cases. *Global Traffic*, 2015 WL 3513416, at *7-8. This Court should step in and fix the problem before it goes any further.

II. The Federal Circuit's Interpretation of § 271(a) Warrants Review.

A. The Federal Circuit Misinterpreted the "Sells" and "Offers to Sell" Provisions of § 271(a).

The Federal Circuit erred in affirming a summary judgment that Pulse did not make infringing sales and offers for sale to Cisco under § 271(a). Section 271(a) provides that "whoever without authority . . . offers to sell or sells any patented invention, within the United States" is liable as an infringer. 35 U.S.C. § 271(a). The statutory text sets two conditions on imposing liability: (i) the defendant must have offered to sell or sold the patented invention, and (ii) the offer to sell or sale must have occurred within the United States. The Federal Circuit legally erred here in interpreting both the offer to sell and sell portions of the statute.

1. This Court has not previously interpreted "sells . . . within the United States" in § 271(a), but it has defined the word "sale" in other contexts. In those cases, the Court held that a sale includes a contract reflecting the parties' agreement:

> A sale really consists of two separate and distinct elements: *first, a contract of sale, which is completed when the offer is made and accepted*; and, second, a delivery of the property which may precede, be accompanied by, or follow, the payment of the price, as may have been agreed upon between the parties. *The substance of the sale is the agreement to sell, and its acceptance.*

Norfolk & W. Ry. Co. v. Sims, 191 U.S. 441, 447 (1903) (emphasis added). This is consistent with the

common law understanding of a "sale," which occurs once the parties have agreed to transfer goods at a specified price. *See, e.g.*, BLACK'S LAW DICTIONARY 1337 (7th ed. 1999) (emphasis added) (defining "sale" as "1. The transfer of property or title for a price. 2. *The agreement by which such a transfer takes place.* The four elements are (1) parties competent to contract, (2) mutual assent, (3) a thing capable of being transferred, and (4) a price in money paid or promised."). The Federal Circuit has likewise recognized that a contract constitutes a "sale" under § 271(a). *Transocean*, 617 F.3d at 1311 ("Our precedent establishes that a contract can constitute a sale to trigger infringement liability.").

The Federal Circuit's initial error here was to adopt a strange, patent-specific definition of what constitutes a contract sufficient to constitute a "sale." The quarterly agreements negotiated between Halo and Cisco are well-known outside patent law as "requirements contracts"—*i.e.*, the buyer agrees to obtain all (or a percentage) of its supply needs of a component from the seller at a specified price.

Requirements contracts have been deemed binding and enforceable at common law for over a century. There are too many authorities on the point to recite them all, so we provide only a few examples, including an early example from California, where Pulse and Cisco form their quarterly contracts. *See, e.g.*, *Brawley v. United States*, 96 U.S. 168 (1877) (enforcing requirements contract between seller and the army for cords of wood); *Bartlett Springs Co. v. Standard Box Co.*, 16 Cal. App. 671 (1911) (enforcing requirements contract for wooden boxes); 1 A. CORBIN, CONTRACTS § 156 (1963) ("A promise to buy from another person or company all or some of the

commodity or service that the promissor may thereafter need or require in his business is not an illusory promise and such a promise is a sufficient consideration for a return promise."); 1 S. WILLISTON, LAW OF CONTRACTS § 104A, at 402-03 (3d ed. 1957) ("Agreements to buy or sell what will be 'needed' or 'required' have been enforced by the courts with little difficulty, where the surrounding circumstances indicate the approximate scope of the promise. Such agreements are termed 'requirement contracts.'"); UNIFORM COMMERCIAL CODE § 2-306 (West 1963) (recognizing the enforceability of requirements contracts for the sale of goods); 48 C.F.R. § 16.503 (setting guidelines for requirements contracts to supply the United States).

What is more, Pulse and Cisco viewed the quarterly agreements as binding here. Pulse's President admitted that "[w]hen we submit that price, we're agreeing, if Cisco orders that number of parts, we will give them that price." (A15443-44.) Likewise, Cisco instructs its manufacturers to obtain Pulse products based on the agreed price and allocation. (*See, e.g.*, A15053-56, A15063-64.) To the extent there was any question about those facts, they must be taken as true, as this issue was resolved against Halo on summary judgment.

Despite the legal precedent showing that requirements contracts are binding sales and the parties' understanding that their agreement was binding, the Federal Circuit thought the quarterly agreements between Pulse and Cisco insufficient because they supposedly "did not constitute a firm agreement to buy and sell, binding on both Cisco and Pulse." (App. 15a.) The Federal Circuit gave no reason why the term "sells" should have a different

meaning in § 271(a) than it does elsewhere in commercial law. In fact, this Court's precedent dictates the term "sells" should have the same meaning in patent law that it does everywhere else. *United States v. Castleman*, 134 S. Ct. 1405, 1410 (2014) ("It is a settled principle of interpretation that, absent other indication, Congress intends to incorporate the well-settled meaning of the common-law terms it uses.").

2. Having concluded that Pulse did not "sell" any patented products to Cisco, the Federal Circuit declined to determine whether a U.S. contract is a sale "within the United States" under § 271(a). (App. 15a n.1.) This Court should hold that it is. The contracts here were negotiated and executed in the United States, are governed by California law, and are between two U.S. companies (Pulse and Cisco). (*See* pp. 7-8 above.) Although delivery occurs abroad and Cisco directs payment to Pulse through manufacturers located abroad, the contract is the "substance of the sale," *Norfolk*, 191 U.S. at 447, and it occurs in the United States. Moreover, Pulse's U.S. activities are harming a U.S. company—Halo—in the U.S. by generating interest in the infringing products in the U.S., and, ultimately, causing Halo to lose business from a U.S. customer. Indeed, Cisco testified that forming the quarterly requirements contract is "an expectation of doing business with Cisco," (A15063), which shows that Pulse would not make any sales of the Halo design to Cisco without these U.S. contracts.

The text of § 271(a) is most naturally read to cover Pulse's U.S. activities. The statute already recites other activities—*i.e.*, "uses" and "imports"—that involve delivery within the United States. This sug-

gests that the "sells" provision is not limited to transactions where delivery occurs in the United States, but also covers transactions where, as here, contracting occurs in the United States but delivery occurs abroad. Otherwise, the "sells" provision would be superfluous, which contradicts the "cardinal principle" that courts "must give effect, if possible, to every clause and word of a statute." *Loughrin v. United States*, 134 S. Ct. 2384, 2390 (2014).

This reading is consistent with this Court's treatment of the location of a "sale" in other contexts. For example, in *Norfolk & W. Ry. Co. v. Sims*, 191 U.S. 441 (1903), this Court held that, for purposes of a tax statute, a "sale" occurs at the place the offer and acceptance occur, not where the goods are delivered and paid for. *Id.* at 447. There, the offer and acceptance occurred in Illinois, while delivery, payment, and transfer of title occurred in North Carolina. The Court held that the "sale" was located in Illinois because "the substance of the sale is the agreement to sell and its acceptance." *Id.*

The same is true here—the "substance" of the "sale" is the quarterly U.S. contract that sets price and quantity (percentage allocation) for each specific product. The subsequent steps that involve overseas payment and delivery simply implement the terms of the already completed U.S. sale.

Interpreting § 271(a)'s sale provision to include a U.S. contract for the patented products also appropriately prevents U.S. harm to a U.S. patentee. Under the Federal Circuit's approach, a U.S. company like Pulse can reap the benefits of doing business in the U.S. with a U.S. customer like Cisco but escape § 271(a) liability. The Federal Circuit expressed con-

cern that imposing liability here might violate the presumption against extraterritoriality because delivery occurs abroad. (App. 15a-16a.) But, here, liability would be based on U.S. conduct—*i.e.*, Pulse's negotiation and contracting with Cisco in the U.S.—so there is no extraterritoriality problem. At most, extraterritoriality may have an impact on the amount of damages, not whether Pulse should be held liable or whether Halo should be entitled to an injunction prohibiting the infringing acts in the U.S.

3. The Federal Circuit made a similar error in its treatment of the provision of § 271(a) that makes "***offers*** to sell . . . within the United States" an infringing act. The Federal Circuit did not question that Pulse made an "offer to sell" to Cisco. Nor could it have—Pulse's President admitted that the quarterly bid meets the requirements for a commercial offer when he said that, "[w]hen we submit that price, we're agreeing, if Cisco orders that number of parts, we will give them that price." (A15443-44.) Moreover, the Federal Circuit did not question that the offers themselves occurred in the United States—they were conveyed from a Pulse employee in San Diego to a Cisco employee in San Jose. (A15003, A15010; A15051-52; A15070-81, A15094-95; A15583; A15096-97, A15098-124; A15134-37.)

Instead, the Federal Circuit held that this still did not constitute an "offer to sell . . . *within the United States*." (App. 18a-19a.) Citing its earlier decision in *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296 (Fed. Cir. 2010), the court stated that "the location of the contemplated sale controls whether there is an offer to sell within the United States." (*Id.*) Apply-

ing that rule, the court referenced its prior conclusion that any "contemplated sale" between Pulse and Cisco did not occur in the United States. (*Id.*)

The Federal Circuit's statutory interpretation was legally erroneous. The statutory text simply requires that the offer itself occur in the United States—it imposes liability on whoever "makes, uses, offers to sell or sells any patented invention, within the United States." 35 U.S.C. § 271(a). The basic rules of grammar require that the phrase "within the United States" apply the same way to each finite verb—*i.e.*, makes, uses, offers, sells—that precedes it. *See* ANDREA LUNSFORD & ROBERT CONNORS, THE ST. MARTINS HANDBOOK 177-79, 185-86 (3d ed. 1995) (discussing verbal phrases and adverb clauses). As a result, the term "within the United States" is properly understood to modify the finite verb "offers," not the infinitive "to sell." *Id.* So the statute simply requires that the "offer" occur "within the United States"—nothing more, nothing less. *Id.*

The Federal Circuit's approach is also inconsistent with the purpose of the statute. Congress added the "offers to sell" provision to § 271(a) in 1994 to conform U.S. law to the Uruguay Round's Trade-Related Aspects of Intellectual Property Agreement (TRIPS). This additional act of infringement was meant to prevent a defendant from "generating interest in a potential infringing product to the commercial detriment of the rightful patentee." *3D Sys., Inc. v. Aarotech Labs., Inc.*, 160 F.3d 1373, 1379 (Fed. Cir. 1998). A party who issues offers for a patented product within the United States is "generating interest" in the product from U.S. customers that, as here, might cause the patentee to lose sales

to those U.S. customers. The statute was thus intended to cover this very type of conduct. The point of amending the statute was to cover a situation in which only an offer was made. Yet the Federal Circuit's rule allows later performance outside the United States to negate the U.S. infringement that has already occurred once the U.S. offer was made.

The Federal Circuit's approach also introduces needless ambiguity in applying the statute. A party can make an "offer to sell" under § 271(a) without providing enough detail to determine where the contemplated "sale" occurs. For example, an "offer" need only include "a description of the allegedly infringing merchandise and the price at which it can be purchased." *3D Sys.*, 160 F.3d at 1379. The offer need not specify the place of future delivery, payment, or where title is to be transferred. But the Federal Circuit here held that the place of contemplated delivery controlled where the sale occurred. It is thus unclear how that court could apply its test when the place of delivery is not specified. What is worse, the test gives U.S. companies an easy way to circumvent U.S. patent law—they could conduct the activities that constitute "the substance of the sale," *Norfolk*, 191 U.S. at 447, in the United States, but then specify delivery abroad to avoid any liability.

B. The Proper Interpretation of § 271(a) is an Important Question That Has Previously Attracted this Court's Attention.

Several reasons show why the interpretation of § 271(a) warrants this Court's review.

1. This Court has previously expressed interest in reviewing the Federal Circuit's interpretation of

§ 271(a). The Court called for the Solicitor General's views regarding whether to grant *certiorari* in *Transocean*, the case the Federal Circuit applied here. *See Maersk Drilling USA, Inc. v. Transocean Offshore Deepwater Drilling, Inc.*, No. 13-43 (Oct. 7, 2013). That case settled before the Solicitor could respond. But several *amici* supported *certiorari*, and one group of law professors pointed to this case as an example of why *Transocean* should be reversed. *See* Br. *Amici Curiae* of Ten Intellectual Property Law Professors in No. 13-43 at 14, *available at* http://bit.ly/1pYxI2V. They explained that "it would seem appropriate under territoriality principles to regulate activity within the United States," like the contracting between Pulse and Cisco, and called the result in this case "perplexing." *Id.* This case presents the opportunity for this Court to review the issue it was unable to review in *Transocean*.

2. The issue in this case frequently recurs as more U.S. companies have moved their manufacturing overseas. Lower courts have been deeply split on the various territoriality issues raised by § 271(a). *Compare ION, Inc. v. Sercel, Inc.*, 2010 WL 3768110, at *4 (E.D. Tex. Sept. 16, 2010), *Semiconductor Energy Lab. Co. v. Chi Mei Optoelectronics Corp.*, 531 F. Supp. 2d 1084, 1110–11 (N.D. Cal. 2007), *Wing Shing Prods. (BVI), Ltd. v. Simatelex Manufactory Co.*, 479 F. Supp. 2d 388, 401 (S.D.N.Y. 2007), *Cybiotronics, Ltd. v. Golden Source Elecs., Ltd.*, 130 F. Supp. 2d 1152, 1170–71 (C.D. Cal. 2001), *and Quality Tubing, Inc. v. Precision Tube Holdings Corp.*, 75 F. Supp. 2d 613, 614–25 (S.D. Tex. 1999), *with MediaTek Inc. v. Freescale Semiconductor, Inc.*, 2014 WL 580836 (N.D. Cal. Feb. 13, 2014), *Wesley Jessen Corp. v. Bausch & Lomb, Inc.*, 256 F. Supp. 2d 228,

233–34 (D. Del. 2003), *and FieldTurf, Inc. v. Sw. Recreational Indus., Inc.*, 235 F. Supp. 2d 708, 731–32 (E.D. Ky. 2002). The Federal Circuit's questionable resolution of this split warrants careful review, because it will impact many parties going forward.

3. This case will also have significant economic consequences. The Federal Circuit's decision dramatically deflates the value of the patent incentive in industries where U.S. companies have outsourced their manufacturing. It allows U.S. companies (like Pulse) to escape liability for their transactions with U.S. customers (like Cisco) by ensuring that all manufacturing and delivery occurs abroad. These U.S. companies will accelerate the move of their manufacturing facilities to countries where intellectual property rights are not readily enforceable. And the result will be the further loss of domestic manufacturing jobs, hurting American workers. The Federal Circuit's decision creates a situation in which a U.S. company would be foolish to manufacture products here, as its liability would be far greater under § 271(a)'s "makes" provision. There is no reason to interpret § 271(a) to punish the companies that keep their manufacturing here while hurting U.S. companies (like Halo) who rely on the patent grant to recoup their investments in new technology.

C. This Case is a Good Vehicle to Resolve the Proper Interpretation of § 271(a).

This case is an ideal vehicle for fixing the Federal Circuit's interpretation of § 271(a). It presents an increasingly common fact pattern—where a sale between two U.S. companies agreed upon in the United States harms a U.S. patentee. Moreover, this case is indicative of the problems with the Federal Circuit's

"perplexing" jurisprudence in this area. *See* Br. *Amici Curiae* of Ten Intellectual Property Law Professors in No. 13-43 at 14, *available at* http://bit.ly/1pYxI2V. The Federal Circuit will not change its jurisprudence without this Court's intervention—between *Transocean* and this case, that court has charted a steady course in the wrong direction. It is thus time for this Court to grant review and correct the Federal Circuit's interpretation of § 271(a).

CONCLUSION

For the reasons above, the petition for a writ of *certiorari* should be granted.

Respectfully submitted,

CRAIG E. COUNTRYMAN
Counsel of Record
Fish & Richardson P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-5070
countryman@fr.com

MICHAEL J. KANE
WILLIAM R. WOODFORD
JOHN A. DRAGSETH
Fish & Richardson P.C.
3200 RBC Plaza
60 South Sixth Street
Minneapolis, MN 55402
(612) 335-5070

Attorneys for Petitioner
Halo Electronics, Inc.

June 22, 2015

APPENDICES

"perplexing" jurisprudence in this area. *See* Br. *Amici Curiae* of Ten Intellectual Property Law Professors in No. 13-43 at 14, *available at* http://bit.ly/1pYxI2V. The Federal Circuit will not change its jurisprudence without this Court's intervention—between *Transocean* and this case, that court has charted a steady course in the wrong direction. It is thus time for this Court to grant review and correct the Federal Circuit's interpretation of § 271(a).

CONCLUSION

For the reasons above, the petition for a writ of *certiorari* should be granted.

Respectfully submitted,

CRAIG E. COUNTRYMAN
Counsel of Record
Fish & Richardson P.C.
12390 El Camino Real
San Diego, CA 92130
(858) 678-5070
countryman@fr.com

MICHAEL J. KANE
WILLIAM R. WOODFORD
JOHN A. DRAGSETH
Fish & Richardson P.C.
3200 RBC Plaza
60 South Sixth Street
Minneapolis, MN 55402
(612) 335-5070

Attorneys for Petitioner
Halo Electronics, Inc.

June 22, 2015

APPENDIX A

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HALO ELECTRONICS, INC.
Plaintiff-Appellant,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,
Defendants-Appellees,

2013-1472, 2013-1656

Appeal from the United States District Court for the District of Nevada in No. 07-CV-0331, Judge Philip M. Pro.

Decided: October 22, 2014

WILLIAM R. WOODFORD, Fish & Richardson P.C., of Minneapolis, Minnesota, argued for plaintiff-appellant. With him on the brief were MICHAEL J. KANE of Minneapolis, Minnesota, and CRAIG E. COUNTRYMAN, of San Diego, California.

MARK L. HOGGE, Dentons US LLP, of Washington, DC, argued for defendants-cross appellants. With him on the brief were SHAILENDRA K. MAHESHWARI, CHARLES R. BRUTON, and RAJESH C. NORONHA.

Before LOURIE, O'MALLEY, and HUGHES, Circuit Judges.

Opinion for the court filed by Circuit Judge LOURIE.

Concurring opinion filed by Circuit Judge O'MALLEY, with whom Circuit Judge HUGHES joins.

LOURIE, Circuit Judge.

Halo Electronics, Inc. ("Halo") appeals from the decisions of the United States District Court for the District of Nevada (1) granting summary judgment that Pulse Electronics, Inc. and Pulse Electronics Corp. (collectively "Pulse") did not sell or offer to sell within the United States the accused products that Pulse manufactured, shipped, and delivered to buyers outside the United States, and thus that Pulse did not directly infringe Halo's U.S. Patents 5,656,985 (the "'985 patent"), 6,297,720 (the "'720 patent"), and 6,344,785 (the "'785 patent") (collectively "the Halo patents"); and (2) holding that Pulse's infringement of the Halo patents with respect to certain accused products that Pulse sold and delivered in the United States was not willful. *See Halo Elecs.*,

Inc. v. Pulse Eng'g, Inc., 810 F. Supp. 2d 1173, 1205–08 (D. Nev. 2011) (sale and offer for sale); *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, No. 2:07-CV-00331, 2013 WL 2319145, at *14–16 (D. Nev. May 28, 2013) (willfulness).

Pulse cross-appeals from the court's decisions (1) construing the claim limitation "electronic surface mount package" in the Halo patents; (2) construing the claim limitation "contour element" in Pulse's U.S. Patent 6,116,963 (the "'963 patent") that Pulse asserted in its counterclaim; and (3) holding that the asserted claims of the Halo patents were not invalid for obviousness. *See Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 721 F. Supp. 2d 989, 998–1001 (D. Nev. 2010) (claim construction); *Halo*, 2013 WL 2319145, at *1–7 (obviousness); *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, No. 2:07-CV-00331, 2013 WL 4458754, at *1–3 (D. Nev. Aug. 16, 2013) (obviousness).

Because we conclude that Pulse did not sell or offer to sell within the United States those accused products that Pulse manufactured, shipped, and delivered outside the United States, we affirm the summary judgment of no direct infringement of the Halo patents by those products. In addition, we find Halo's argument on appeal concerning the issue of willfulness unpersuasive and accordingly affirm the judgment of no willful infringement of the Halo patents with respect to products that were delivered in the United States. On the cross-appeal, because we find no reversible error in the contested claim constructions, we affirm the judgment of direct infringement of the Halo patents with respect to products that Pulse delivered in the United States and the judgment of inducement with respect to products that Pulse delivered outside the United States but

were ultimately imported into the United States by others, as well as the judgment of noninfringement of Pulse's '963 patent. We also affirm the judgment that the asserted claims of the Halo patents were not invalid for obviousness.

BACKGROUND

Halo is a supplier of electronic components and owns the '985, '720, and '785 patents directed to surface mount electronic packages containing transformers for mounting on a printed circuit board inside electronic devices such as computers and internet routers. The Halo patents are all derived from an application filed on August 10, 1995. At issue here are claims 6–8 and 16 of the '985 patent, claims 1 and 6 of the '720 patent, and claims 40 and 48 of the '785 patent (collectively "the asserted claims"). Claim 6 of the '985 patent is representative and reads as follows:

> 6. An electronic surface mount package for mounting on a printed circuit board in an electronic device, said electronic surface mount package comprising:
>
> a one piece construction package having a side wall and an open bottom,
>
> a plurality of toroid transformers carried within said package by a soft silicone material, said toroid transformers each having wires wrapped thereon,
>
> a plurality of terminal pins molded within and

> extending from the bottom of said package, each of said pins extending through a bottom of said side wall and having a notched post upon which said wires from said transformers are wrapped and soldered thereon, respectively.

'985 patent col. 4 ll. 19–33.

Pulse, another supplier of electronic components, designs and sells surface mount electronic packages and manufactures those products in Asia. Some of Pulse's products were delivered by Pulse to customers in the United States, but the majority of them were delivered outside the United States, for example, to contract manufacturers for companies such as Cisco. Those contract manufacturers incorporated the electronic packages supplied by Pulse into end products overseas, including internet routers manufactured for Cisco, which were then sold and shipped to consumers around the world.

For those products that Pulse delivered abroad, all purchase orders were received at Pulse's sales offices abroad. *Halo*, 810 F. Supp. 2d at 1207. However, Pulse engaged in pricing negotiations in the United States with companies such as Cisco, and Pulse's employees in the United States approved prices that its agents quoted to foreign customers when the quoted prices fell below certain thresholds. Pulse also engaged in other activities in the United States, including meeting regularly with Cisco design engineers, sending product samples to Cisco for pre-approval, attending sales meetings with its customers, and providing post-sale support for its products.

Although Cisco outsourced its manufacturing activities to foreign contract manufacturers, Cisco negotiated with its component suppliers the prices that its contract manufacturers would pay when purchasing component parts. As one of Cisco's component suppliers, Pulse executed a general agreement with Cisco that set forth manufacturing capacity, low price warranty, and lead time terms. J.A. 15135–37. However, that general agreement did not refer to any specific Pulse product or price. Cisco typically sent a request for quote to its component suppliers and Pulse responded with the proposed price and minimum quantity for each product as identified by its part number. After further negotiation, Cisco issued the agreed-upon price, projected demand, and percentage allocation to Pulse for each product for the upcoming quarter. The percentage allocation divided Cisco's projected quarterly demand among its suppliers. Cisco then communicated the price and allocation to its contract manufacturers in Asia, and the contract manufacturers were expected to apply the Cisco price and allocation when ordering components from Pulse and other suppliers.

Upon receipt of purchase orders abroad, Pulse delivered the electronic package products from its manufacturing facility in Asia to Cisco contract manufacturers, also located in Asia, which then paid Pulse. After assembling the end products, the contract manufacturers submitted invoices to Cisco that itemized the cost of Pulse products and other components that were incorporated into the Cisco end products. Cisco then paid the contract manufacturers for the end products.

Pulse allegedly knew of the Halo patents as early as 1998. In 2002, Halo sent Pulse two letters offering licenses to its patents, but did not accuse Pulse of infringement in those letters. J.A. 5953–54. The president of Pulse contacted a Pulse engineer, who spent about two hours reviewing the Halo patents and concluded that they were invalid in view of prior Pulse products. Pulse did not seek an opinion of counsel on the validity of the Halo patents at that time and continued to sell its surface mount electronic package products. A Pulse witness later testified that she was "not aware of anyone in the company ... that made a conscious decision" that "it was permissible to continue selling" those products. J.A. 2245.

In 2007, Halo sued Pulse for patent infringement. Pulse denied infringement and challenged the validity of the Halo patents based on obviousness and other grounds. Pulse also counterclaimed that Halo infringed Pulse's '963 patent directed to microelectronic connectors.

The district court first construed the disputed claim limitations in the Halo patents and Pulse's '963 patent. Relevant to this appeal, the court construed "electronic surface mount package" in the preamble of the Halo patent claims as non-limiting. *Halo*, 721 F. Supp. 2d at 999–1001. The court then further construed the term to mean "an electronic device configured to attach to the surface of a DC voltage only printed circuit board." *Id.* In addition, the court construed "contour element" in the '963 patent claims to mean "a raised or recessed feature that physically contacts the bend of an electrical lead both before and after the modular plug is inserted into the cavity." Id. at 998–99. In view of that latter construction, the parties stipulated to a judgment of

noninfringement of the Pulse '963 patent. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, No. 2:07-CV-00331, ECF No. 215 (D. Nev. Sept. 2, 2010).

Pulse moved for summary judgment that it did not directly infringe the Halo patents by selling or offering to sell products that Pulse manufactured, shipped, and delivered outside the United States. The district court granted the motion, holding that those products were sold and offered for sale outside the United States and beyond the scope of § 271(a). *Halo*, 810 F. Supp. 2d at 1206–08.

The parties next proceeded to trial on Halo's claims of (1) direct infringement by products that Pulse shipped into the United States and (2) inducement of infringement by products that Pulse shipped outside the United States but were incorporated into end products that were ultimately imported into the United States. The jury found that: (1) Pulse directly infringed the Halo patents with products that it shipped into the United States; (2) it induced others to infringe the Halo patents with products that it delivered outside the United States but ultimately were imported into the United States in finished end products; (3) it was highly probable that Pulse's infringement was willful; and (4) the asserted claims of the Halo patents were not invalid for obviousness. *Halo*, 2013 WL 2319145, at *1; *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, No. 2:07-CV-00331, ECF No. 482 (D. Nev. Nov. 26, 2012). The jury awarded Halo $1.5 million in reasonable royalty damages. *Id.*

In response to Pulse's post-trial motion, the district court concluded that the objective component of a willfulness inquiry was not satisfied because Pulse "reasonably relied on at least its obviousness defense" and Pulse's unsuccessful obviousness de-

fense was not "objectively baseless." *Halo*, 2013 WL 2319145, at *15. The court therefore held that Pulse's infringement was not willful. Id. at *16.

Pulse also moved for JMOL of invalidity for alleged obviousness of the Halo patent claims, which the district court denied. *Halo*, 2013 WL 2319145, at *1–7; *Halo*, 2013 WL 4458754, at *1–3. The court reasoned that, because Pulse did not file a preverdict motion under Fed. R. Civ. P. 50(a) on the issue of obviousness, Pulse had waived its right to challenge the jury's implicit factual findings underlying the nonobviousness general verdict. Id. While noting that "each of the elements present in the asserted patent claims also were present in the prior art, except the standoff element" in two of the asserted claims, *Halo*, 2013 WL 2319145, at *3, the court presumed that the jury resolved all factual disputes relating to the scope and content of the prior art and secondary considerations in Halo's favor and concluded that the asserted claims were not invalid for obviousness based upon those presumed factual findings, id. at *3–7.

Halo timely appealed and Pulse timely cross-appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

I. Sale and Offer for Sale

We review the district court's grant or denial of summary judgment under the law of the regional circuit, here the Ninth Circuit. *Lexion Med., LLC v. Northgate Techs.*, Inc., 641 F.3d 1352, 1358 (Fed. Cir. 2011). Applying the law of the Ninth Circuit, we review the grant or denial of summary judgment de novo. *Humane Soc'y of the U.S. v. Locke*, 626 F.3d

1040, 1047 (9th Cir. 2010). Summary judgment is appropriate when, drawing all justifiable inferences in the nonmovant's favor, "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

Halo argues that the district court erred in granting summary judgment of no direct infringement with respect to products that Pulse delivered abroad. Halo contends that those products were sold and offered for sale within the United States because negotiations and contracting activities occurred within the United States, which resulted in binding contracts that set specific terms for price and quantity. Halo argues that the location of the sale or offer for sale should not be limited to the location of delivery. Halo also argues that it suffered economic harm in the United States as a result of Pulse's sales.

Pulse responds that the products at issue were sold or offered for sale outside the United States because those products were manufactured, ordered, invoiced, shipped, and delivered abroad. Pulse maintains that its pricing discussions with Cisco in the United States were merely forecasts and were not a guarantee that Pulse would receive any actual order from any of Cisco's contract manufacturers. Pulse also responds that the district court's holding is consistent with our case law and the presumption against extraterritorial application of United States laws. Pulse contends that Halo improperly sought to expand the geographical scope of § 271(a) to reach activities outside the United States.

We agree with Pulse that the district court did not err in granting summary judgment of no direct infringement with respect to those products that Pulse manufactured, shipped, and delivered outside the United States because those products were neither sold nor offered for sale by Pulse within the United States.

A. Sale

Section 271(a) of the patent statute provides in relevant part that "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . infringes the patent." 35 U.S.C. § 271(a) (emphases added); *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 441 (2007) ("It is the general rule under United States patent law that no infringement occurs when a patented product is made and sold in another country."). We first consider whether the products that Pulse manufactured, shipped, and delivered to buyers abroad were sold within the United States for purposes of § 271(a).

Our earlier cases addressing the issue of the location of a sale arose in the context of personal jurisdiction. In *North American Philips Corp. v. American Vending Sales, Inc.*, 35 F.3d 1576 (Fed. Cir. 1994), a case involving domestic sales by defendants who shipped products from Texas and California free on board (f.o.b.) to buyers in Illinois, and concerning whether a trial court in Illinois had personal jurisdiction over the defendants, we held that patent infringement occurs where the infringing sales are made. *Id.* at 1577–79 (citing *Beverly Hills Fan Co. v. Royal Sovereign Corp.*, 21 F.3d 1558, 1570–71 (Fed. Cir. 1994)). We stated that:

> [T]he "selling" of an infringing article has both a physical and a conceptual dimension to it. That is to say, it is possible to define the situs of the tort of infringement-by-sale either in real terms as including the location of the seller and the buyer and perhaps the points along the shipment route in between, or in formal terms as the single point at which some legally operative act took place, such as the place where the sales transaction would be deemed to have occurred as a matter of commercial law.

Id. at 1579. We rejected the defendants' argument that the location of the sale was limited to "the place where legal title passe[d] rather than the more familiar places of contracting and performance." Id. (citing *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 478–79 (1985)). And we held that the sale in that case occurred in Illinois where the buyer was located, but "not necessarily only there." Id. Thus, under North American Philips, a sale may occur at multiple locations, including the location of the buyer, for purposes of personal jurisdiction.

In subsequent cases in which we addressed the issue of liability under § 271(a) rather than personal jurisdiction, we applied similar analyses to determine where a sale occurred based on factors that included places of contracting and performance. *Litecubes, LLC v. N. Light Prods., Inc.*, 523 F.3d 1353, 1370 (Fed. Cir. 2008); *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 420 F.3d 1369, 1377 (Fed. Cir. 2005). Although the place of

contracting may be one of several possible locations of a sale to confer personal jurisdiction, we have not deemed a sale to have occurred within the United States for purposes of liability under § 271(a) based solely on negotiation and contracting activities in the United States when the vast majority of activities underlying the sales transaction occurred wholly outside the United States. For such a sale, one must examine whether the activities in the United States are sufficient to constitute a "sale" under § 271(a), recognizing that a strong policy against extraterritorial liability exists in the patent law. *See Microsoft*, 550 U.S. at 455 ("The traditional understanding that our patent law operate[s] only domestically and do[es] not extend to foreign activities is embedded in the Patent Act itself." (alterations in original) (citation and quotation marks omitted)); *MEMC*, 420 F.3d at 1375–76 ("[T]he reach of section 271(a) is limited to infringing activities that occur within the United States.").

The patent statute does not define the meaning of a "sale" within the United States for purposes of § 271(a). We have stated that "the ordinary meaning of a sale includes the concept of a transfer of title or property." *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1319 (Fed. Cir. 2005). Indeed, Article 2 of the Uniform Commercial Code, which is recognized as a persuasive authority on the sale of goods, provides that "[a] 'sale' consists in the passing of title from the seller to the buyer for a price." U.C.C. § 2-106; *see also Black's Law Dictionary* 1364 (8th ed. 2004) (defining "sales" as "[t]he transfer of property or title for a price"). Section 2-106 separately defines a "contract for sale" as including "both a present sale

of goods and a contract to sell goods at a future time."

While we have held that a sale is "not limited to the transfer of tangible property" but may also be determined by "the agreement by which such a transfer takes place," *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Contractors USA, Inc.*, 617 F.3d 1296, 1311 (Fed. Cir. 2010) (citing NTP, 418 F.3d at 1319), the location of actual or anticipated performance under a "contract for sale" remains pertinent to the transfer of title or property from a seller to a buyer, see id. at 1310 (considering the location of delivery and performance under a contract). Consistent with all of our precedent, we conclude that, when substantial activities of a sales transaction, including the final formation of a contract for sale encompassing all essential terms as well as the delivery and performance under that sales contract, occur entirely outside the United States, pricing and contracting negotiations in the United States alone do not constitute or transform those extraterritorial activities into a sale within the United States for purposes of § 271(a).

On undisputed facts, the products under discussion here were manufactured, shipped, and delivered to buyers abroad. *Halo*, 810 F. Supp. 2d at 1207 ("All accused products [at issue] were at no point, in transit or otherwise, in the United States."). In addition, Pulse received the actual purchase orders for those products abroad. Although Pulse and Cisco had a general business agreement, that agreement did not refer to, and was not a contract to sell, any specific product. J.A. 15135–37. While Pulse and Cisco engaged in quarterly pricing negotiations for specific products, the negotiated price and projected demand

did not constitute a firm agreement to buy and sell, binding on both Cisco and Pulse. Instead, Pulse received purchase orders from Cisco's foreign contract manufacturers, which then firmly established the essential terms including price and quantity of binding contracts to buy and sell. Moreover, Pulse was paid abroad by those contract manufacturers, not by Cisco, upon fulfillment of the purchase orders. Thus, substantial activities of the sales transactions at issue, in addition to manufacturing and delivery, occurred outside the United States. Although Halo did present evidence that pricing negotiations and certain contracting and marketing activities took place in the United States, which purportedly resulted in the purchase orders and sales overseas, as indicated, such pricing and contracting negotiations alone are insufficient to constitute a "sale" within the United States.[1]

Any doubt as to whether Pulse's contracting activities in the United States constituted a sale within the United States under § 271(a) is resolved by the presumption against extraterritorial application of United States laws. "The presumption that United States law governs domestically but does not rule the world applies with particular force in patent law." *Microsoft*, 550 U.S. at 454–55. As the Supreme Court has stated on multiple occasions, "[o]ur patent

---

[1] On these facts, we need not reach Halo's argument that the place where a contract for sale is legally formed can itself be determinative as to whether a sale has occurred in the United States because we agree with the district court here that the pricing negotiations and contracting activities in the United States to which Halo points did not constitute the final formation of a definitive, binding contract for sale.

system makes no claim to extraterritorial effect; these acts of Congress do not, and were not intended to, operate beyond the limits of the United States, and we correspondingly reject the claims of others to such control over our markets." *Id.* at 444 (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 531 (1972) (quoting *Brown v. Duchesne*, 60 U.S. (19 How.) 183, 195 (1857))) (internal citation and quotation marks omitted).

"Foreign conduct is [generally] the domain of foreign law," and in patent cases, foreign law "may embody different policy judgments about the relative rights of inventors, competitors, and the public in patented inventions." *Id.* at 455 (alteration in original) (quoting Brief for United States as *Amicus Curiae* 28). As the Supreme Court has stated, if one desires to prevent the selling of its patented invention in foreign countries, its proper remedy lies in obtaining and enforcing foreign patents. *See Deepsouth*, 406 U.S. at 531 ("To the degree that the inventor needs protection in markets other than those of this country, the wording of 35 U.S.C. §§ 154 and 271 reveals a congressional intent to have him seek it abroad through patents secured in countries where his goods are being used.").

We also reject Halo's argument that the sales at issue occurred in the United States simply because Halo suffered economic harm as a result of those sales. The incurring of harm alone does not control the infringement inquiry. As indicated, Pulse's activities in the United States were insufficient to constitute a sale within the United States to support direct infringement. *See N. Am. Philips*, 35 F.3d at 1579 ("[T]he statute on its face clearly suggests the conception that the 'tort' of patent in-

fringement occurs where the offending act is committed and not where the injury is felt."). Moreover, Halo recovered damages for products that Pulse delivered outside the United States but were ultimately imported into the United States in finished end products based on a theory of inducement.

Following Halo's logic, a foreign sale of goods covered by a U.S. patent that harms the business interest of a U.S. patent holder would incur infringement liability under § 271(a). Such an extension of the geographical scope of § 271(a) in effect would confer a worldwide exclusive right to a U.S. patent holder, which is contrary to the statute and case law. *See, e.g., Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1371– 72 (Fed. Cir. 2013) ("[T]he entirely extraterritorial production, use, or sale of an invention patented in the United States is an independent, intervening act that, under almost all circumstances, cuts off the chain of causation initiated by an act of domestic infringement.") (citing *Morrison v. Nat'l Austl. Bank Ltd.*, 561 U.S. 247, 266 (2010) ("But the presumption against extraterritorial application would be a craven watchdog indeed if it retreated to its kennel whenever *some* domestic activity is involved in the case." (emphasis in original))).

We therefore hold that the district court did not err in granting summary judgment that Pulse did not sell within the United States those products that Pulse manufactured, shipped, and delivered abroad.

B. Offer for Sale

We next consider whether Pulse offered to sell within the United States those products that Pulse manufactured, shipped, and delivered abroad. An "offer to sell" generally occurs when one "communicate[s] a manifestation of willingness to enter into a bargain, so made as to justify another person in understanding that his assent to that bargain is invited and will conclude it." *MEMC*, 420 F.3d at 1376 (internal quotation marks omitted). We have held that "a description of the allegedly infringing merchandise and the price at which it can be purchased" may constitute an offer to sell. *3D Sys., Inc. v. Aarotech Labs., Inc.*, 160 F.3d 1373, 1379 (Fed. Cir. 1998). *3D Systems* did not, however, involve international transactions and in that case this court considered the issue of offer to sell in a personal jurisdiction context.

More importantly, we have held that "the location of the contemplated sale controls whether there is an offer to sell *within the United States*." *Transocean*, 617 F.3d at 1309 (emphasis added). "In order for an offer to sell to constitute infringement, the offer must be to sell a patented invention within the United States." *Id.* In *Transocean*, contract negotiations occurred outside the United States for delivery and performance in the United States. This court held that the location of the contemplated sale controlled and that the offer to sell infringed the patent at issue.

The case now before us involves the opposite situation, where the negotiations occurred in the United States, but the contemplated sale occurred outside the United States. We adopt the reasoning of

Transocean and conclude here that Pulse did not directly infringe the Halo patents under the "offer to sell" provision by offering to sell in the United States the products at issue, because the locations of the contemplated sales were outside the United States. Cisco outsourced all of its manufacturing activities to foreign countries, and it is undisputed that the locations of the contemplated sales were outside the United States. Likewise, with respect to other Pulse customers, there is no evidence that the products at issue were contemplated to be sold within the United States.

An offer to sell, in order to be an infringement, must be an offer contemplating sale in the United States. Otherwise, the presumption against extraterritoriality would be breached. If a sale outside the United States is not an infringement of a U.S. patent, an offer to sell, even if made in the United States, when the sale would occur outside the United States, similarly would not be an infringement of a U.S. patent. We therefore hold that Pulse did not offer to sell the products at issue within the United States for purposes of § 271(a).

For the foregoing reasons, we affirm the summary judgment of no direct infringement with respect to those products that Pulse manufactured, shipped, and delivered abroad.

II. Willfulness

Establishing willful infringement of a valid patent requires a two-prong analysis entailing an objective and a subjective inquiry. First, "a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood

that its actions constituted infringement of a valid patent." *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc). "The state of mind of the accused infringer is not relevant to this objective inquiry." *Id.* Second, if the "threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer." *Id.* The objective prong is subject to *de novo review*. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs.*, Inc., 682 F.3d 1003, 1005 (Fed. Cir. 2012).

The district court held here that the objective prong was not met because it concluded that the obviousness defense that Pulse presented at trial was not objectively baseless. Halo challenges that holding mainly by arguing that Pulse did not actually rely on any invalidity defense pre-suit when selling the accused products because Pulse's obviousness defense was developed after the lawsuit was filed in 2007. Halo also contends that after Pulse received Halo's notice letters in 2002, the Pulse engineer only performed a cursory review of the Halo patents and Pulse did not rely on that analysis to assess whether it was infringing a valid patent. Halo asserts that the court erred in holding that the objective prong was not met simply because Pulse raised a non-frivolous obviousness defense.

Pulse responds that the district court properly considered Pulse's post-suit obviousness defense to evaluate the objective risk of infringement of a valid patent. Pulse also responds that Pulse did not act recklessly pre-suit because Halo did not accuse Pulse of infringement in the 2002 letters and, upon receipt

of those letters, Pulse asked its engineer to review the Halo patents, who concluded that the patents were invalid in view of prior Pulse products. Pulse also maintains that its obviousness defense presented at trial raised a substantial question of invalidity and thus was objectively reasonable.

We agree with Pulse that the district court did not err in holding that the objective prong of the willfulness inquiry was not satisfied. "*Seagate's* first prong is objective, and '[t]he state of mind of the accused infringer is not relevant to this objective inquiry.'" *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1336 (Fed. Cir. 2009) (alteration in original) (quoting Seagate, 497 F.3d at 1371). The court properly considered the totality of the record evidence, including the obviousness defense that Pulse developed during the litigation, to determine whether there was an objectively-defined risk of infringement of a valid patent.

The record shows that although Pulse was ultimately unsuccessful in challenging the validity of the Halo patents, Pulse did raise a substantial question as to the obviousness of the Halo patents. *Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1319 (Fed. Cir. 2010) (reversing the trial court's denial of JMOL of no willfulness because the infringer raised a substantial question as to the obviousness of the asserted patent). Pulse presented evidence that the prior art disclosed each element of the asserted claims, that it would have been predictable to combine and modify the prior art to create the claimed electronic packages, and that there were differences between the prior art considered by the PTO and the prior art introduced at trial. *See Halo*, 2013 WL 2319145, at *15 (summarizing ev-

idence presented by Pulse on obviousness). Pulse also challenged Halo's evidence of secondary considerations. *Id.*

In light of the record as a whole, we agree with the district court that Pulse's obviousness defense was not objectively unreasonable.

Accordingly, having considered all of Halo's arguments on appeal concerning willfulness and found them unpersuasive, we affirm the district court's judgment that Pulse's infringement of the Halo patents was not willful.

III. Cross-Appeal

Pulse cross-appeals from the district court's construction of the claim limitations "electronic surface mount package" in the Halo patents and "contour element" in Pulse's '963 patent and the resulting judgments of infringement of the Halo patents and noninfringement of Pulse's '963 patent. We have considered Pulse's arguments but find no reversible error in those judgments. We therefore affirm the judgment of direct infringement with respect to products that Pulse delivered in the United States and the judgment of inducement with respect to products that Pulse delivered outside the United States but ultimately were imported into the United States in finished end products, as well as the judgment of noninfringement of Pulse's '963 patent.

In addition, Pulse cross-appeals from the judgment that the asserted claims of the Halo patents were not invalid for obviousness. It is true that the record evidence indisputably shows that almost all the limitations in the asserted claims were known elements of electronic packages that existed in the

prior art. However, Pulse did not file a motion during trial under Fed. R. Civ. P 50(a) on the issue of obviousness before that issue was submitted to the jury and thus waived its right to challenge the jury's implicit factual findings underlying the nonobviousness general verdict. The district court thus correctly presumed that the jury resolved all factual disputes relating to the scope and content of the prior art and secondary considerations in Halo's favor. Based upon those presumed factual findings, the court did not err in reaching the ultimate legal conclusion that the asserted claims were not invalid for obviousness. We therefore affirm the judgment that the asserted claims of the Halo patents were not invalid for obviousness.

CONCLUSION

We have considered the parties' remaining arguments and conclude that they are without merit. For the foregoing reasons, we affirm the judgment that Pulse did not directly infringe the Halo patents by selling or offering to sell within the United States those accused products that Pulse manufactured, shipped, and delivered outside the United States. We also affirm the judgment that Pulse's infringement was not willful. On the cross-appeal, because we discern no reversible error in the contested claim constructions, we affirm the judgment of direct infringement with respect to products that Pulse delivered in the United States and the judgment of inducement with respect to products that Pulse delivered outside the United States but were imported into the United States by others, as well as the judgment of noninfringement of Pulse's '963 patent.

We also affirm the judgment that the asserted claims of the Halo patents were not shown to be invalid for obviousness.

AFFIRMED

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HALO ELECTRONICS, INC.
Plaintiff-Appellant,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,
Defendants-Appellees,

2013-1472, 2013-1656

Appeal from the United States District Court for the District of Nevada in No. 07-CV-0331, Judge Philip M. Pro.

O'MALLEY, Circuit *Judge*, concurring, with whom HUGHES, Circuit *Judge*, joins.

I agree with the majority's thoughtful conclusion that we should affirm all aspects of the district court's decision in this case. I write separately because, although we are bound by our precedent at the panel stage, I believe it is time for the full court to reevaluate our standard for the imposition of enhanced damages in light of the Supreme Court's recent decisions in *Highmark Inc. v. Allcare Health*

Management Systems, Inc., 134 S. Ct. 1744 (2014) and *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), and the terms of the governing statutory provision, 35 U.S.C. § 284 (2012).

Our current two-prong, objective/subjective test for willful infringement set out in *In re Seagate Technology, LLC*, 497 F.3d 1360 (Fed. Cir. 2007) (en banc) is analogous to the test this court prescribed for the award of attorneys' fees under § 285 in *Brooks Furniture Manufacturing, Inc. v. Dutailier International, Inc.*, 393 F.3d 1378, 1381–82 (Fed. Cir. 2005), overruled by *Octane Fitness*, 134 S. Ct. at 1757–58. The parallel between our tests for these two issues is not surprising. Both enhanced damages and attorneys' fees are authorized under similar provisions in title 35 of the United States Code (the Patent Act of 1952). *Compare* 35 U.S.C. § 284 ("[T]he court may increase the damages up to three times the amount found or assessed.") with 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party."). Although § 284 does not limit enhanced damages to "exceptional cases" as does § 285 for attorneys' fees, the Supreme Court has explained that increased damages are only available "in a case of willful or bad-faith infringement." *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964).

As such, our standard for the award of enhanced damages under § 284 has closely mirrored our standard for the award of attorneys' fees under § 285. *See, e.g., Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007 (Fed. Cir. 2012) ("Our holding is consistent with similar holdings in other parallel areas of law. Our prece-

dent regarding objectively baseless claims, which allow courts to award enhanced damages and attorneys' fees under 35 U.S.C. § 285, and the Supreme Court's precedent on 'sham' litigation are instructive."); *iLOR, LLC v. Google, Inc.*, 631 F.3d 1372, 1377 (Fed. Cir. 2011) ("The objective baselessness standard for enhanced damages and attorneys' fees against a non-prevailing plaintiff under *Brooks Furniture* is identical to the objective recklessness standard for enhanced damages and attorneys' fees against an accused infringer for § 284 willful infringement actions under [*Seagate*]."). Indeed, our willfulness test, as described in *Seagate* and *Bard*, and our old § 285 test, under *Brooks Furniture*, both were predicated on our interpretation of the Supreme Court's decision in *Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc.* ("*PRE*"), 508 U.S. 49 (1993), which we believed required a two-step objective/ subjective inquiry before either enhanced damages or attorneys' fees could be awarded.

The Supreme Court has now told us that our reading of *PRE* was wrong. In *Octane Fitness*, the Court explained that the *PRE* standard was crafted as a very narrow exception for "sham" litigation to avoid chilling the exercise of the First Amendment right to petition the government for redress of grievances with the threat of antitrust liability. This narrow test required that a "sham" litigation be "objectively baseless" and "brought in an attempt to thwart the competition." *Octane Fitness*, 134 S. Ct. at 1757 (citing *PRE*, 508 U.S. at 60–61). In rejecting Brooks Furniture's reliance on *PRE* in the § 285 context, the Supreme Court stated that the narrow *PRE* standard "finds no roots in the text of § 285" and the chilling

effect of shifting attorney's fees is not as great as the threat of antitrust liability. *Id.* at 1757–58.

Because we now know that we were reading *PRE* too broadly, and have been told to focus on the governing statutory authorization to determine what standards should govern an award of attorneys' fees, we should reconsider whether those same interpretative errors have led us astray in our application of the authority granted to district courts under § 284. Just as "the *PRE* standard finds no roots in the text of § 285," id., there is nothing in the text of § 284 that justifies the use of the *PRE* narrow standard. In rejecting the rigid two-prong, subjective/ objective test for § 285 under *Brooks Furniture*, the Supreme Court told us to employ a flexible totality of the circumstances test. Id. at 1756. We should now assess whether a similar flexible test is appropriate for an award of enhanced damages.

The substantive test is not the only part of our willfulness jurisprudence that requires our attention. In *Octane Fitness*, the Supreme Court also rejected the requirement that patent litigants establish their entitlement to attorneys' fees under § 285 by "clear and convincing evidence." *Id.* at 1758. As we used to do for attorneys' fees, we currently require patentees to prove willfulness by clear and convincing evidence. *See Seagate*, 497 F.3d at 1371. As the Supreme Court explained in *Octane Fitness*, however, the ordinary rule in civil cases, and specifically patent infringement cases, is proof by a preponderance of the evidence. *Herman & Mclean v. Huddleston*, 459 U.S. 375, 390 (1983); *see also Octane Fitness*, 134 S. Ct. at 1758 (citing *Bene v. Jeantet*, 129 U.S. 683, 688 (1889)). In fact, other courts only require proof of willfulness by a preponderance of the evidence in

similar contexts. *E.g.*, *Fishman Transducers, Inc. v. Paul*, 685 F.3d 187, 193 (1st Cir. 2012) (holding that a preponderance of the evidence standard was appropriate to prove willfulness in a trademark infringement case); *Columbia Pictures Indus., Inc. v. Liberty Cable, Inc.*, 919 F. Supp. 985 (S.D.N.Y. 1996) (explaining that plaintiff must prove willful copyright infringement by a preponderance of the evidence). As with § 285, moreover, § 284 has no language that would justify a higher standard of proof; it just demands a simple discretionary inquiry and imposes no specific evidentiary burden. *See Octane Fitness*, 134 S. Ct. 1758. This court should evaluate whether there are any reasons to maintain a standard that is at odds with the ordinary standard in civil cases for a finding of willfulness where nothing in the statutory text even hints that we do so.

The Supreme Court also rejected de novo review of a fee award under § 285. *Highmark*, 134 S. Ct. at 1748. 'exceptional' under § 285 is a matter of discretion," which "is to be reviewed only for abuse of discretion." *Id.* Section 284 also leaves the issue of enhanced damages to the discretion of the court. *Compare* 35 U.S.C. § 284 ("[T]he court may increase the damages . . . ." (emphasis added)) with 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party." (emphasis added)). Indeed, other appellate courts review similar willfulness findings with more deference. *E.g.*, *Dolman v. Agee*, 157 F.3d 708, 714–15 (9th Cir. 1998) (reviewing a finding of willful copyright infringement for clear error). As such, we must also consider whether a district court's finding of willfulness should be subject to de novo review.

Finally, under the plain language of §§ 284 and 285, "the court" is the entity that decides whether the remedy is appropriate. 35 U.S.C. § 284 ("*[T]he court* may increase the damages . . . ." (emphasis added)); 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party." (emphasis added)). While we allowed the court to determine whether to award attorneys' fees under *Brooks Furniture*, we have long held that a willfulness determination contains issues of fact that should be submitted to a jury. *See Bard*, 682 F.3d at 1005 (holding that the objective prong under *Seagate* was ultimately a question of law for the court, but leaving the subjective prong as a question of fact for the jury); *see also Nat'l Presto Indus., Inc. v. West Bend Co.*, 76 F.3d 1185, 1193 (Fed. Cir. 1996) ("The issue of willful infringement remains with the trier of fact."); *Braun Inc. v. Dynamics Corp. of Am.*, 975 F.2d 815, 822 (Fed. Cir. 1992) ("Whether infringement is willful is a question of fact and the jury's determination as to willfulness is therefore reviewable under the substantial evidence standard." (citation omitted)). Although not directly addressed by the Supreme Court, when we reevaluate the proper test for an award of enhanced damages, this court should also consider whether § 284 requires a decision on enhanced damages to be made by the court. The mere presence of factual components in a discretionary inquiry does not remove that inquiry from the court to whom congress reposed it. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 992 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996) ("Even within the realm of factual questions, whether a particular question must always go to a jury depends 'on whether the jury must shoulder this responsibility as

necessary to preserve the substance of common law right of trial by jury.'" (quoting Tull v. United States, 481 U.S. 412, 417 (1987))).

For the following reasons, although we are bound by *Seagate* and *Bard* as a panel, I urge the full court to reevaluate our willfulness jurisprudence in light of the Supreme Court's decisions in *Highmark* and *Octane Fitness*.

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

HALO ELECTRONICS, INC., Plaintiff, v. PULSE ELECTRONICS, INC. and PULSE ELECTRONICS CORPORATION, Defendants.	C.A. No. 2:07-CV-00331-PMP-PAL

ORDER

Before the Court is Defendants Pulse Electronics, Inc. and Pulse Electronics Corporation's (collectively "Pulse") Motion for Entry of Findings of Fact and Conclusions of Law Under Rule 52 (Doc. #514), filed January 11, 2013. Plaintiff Halo Electronics, Inc. ("Halo") filed a Response (Doc. #517) on January 25, 2013. Pulse filed a Reply (Doc. #518) on February 1, 2013.

This patent infringement case was tried before a jury beginning on November 6, 2012. (Mins. of Proceedings (Doc. #427).) On November 26, 2012, the jury returned a verdict finding all, except one, of Pulse's accused products directly infringed the asserted patent claims, and that Pulse induced others

to infringe the asserted patent claims with respect to all, except one, of Pulse's accused products. (Jury Verdict (Doc. #482) at 1-8.) The jury also found Halo had proven it was highly probable Pulse's infringement was willful. (Id. at 9.) The jury further found Pulse had not proven the asserted patent claims were invalid for obviousness or for failing to name all inventors. (Id. at 9-10.) Finally, the jury determined the date Halo began marking its products, a reasonable royalty rate, and an adequate amount of damages to compensate Halo for Pulse's infringement. (Id. at 11.)

The issues remaining for the Court are the legal determinations of Pulse's obviousness defense and the objective element of Halo's willfulness claim. Additionally, the Court must rule on the equitable determinations of Pulse's inequitable conduct, equitable estoppel, and laches defenses. Based upon the testimony of the witnesses at trial and other evidence in the record, the Court hereby enters the following Findings of Fact and Conclusions of Law on these remaining legal and equitable issues. The Court first addresses Pulse's obviousness, inequitable conduct, equitable estoppel, and laches defenses, and then considers Halo's willfulness claim.

I. OBVIOUSNESS

Pulse argues it has proven by clear and convincing evidence that the asserted patent claims are obvious. According to Pulse, its infringement expert demonstrated that each element of the asserted patent claims was well known in the prior art before Halo filed its patent application and that the ele-

ments were combined in a predictable way. Pulse further argues that the secondary considerations of obviousness weigh in favor of obviousness. Pulse contends the commercial success of the patented design was due to litigation-driven licenses and not the products themselves. Pulse further argues there was no long-felt need for or initial skepticism of Halo's design because Pulse had been selling the open header design that solved the problem of cracking under high pressure for years before Halo filed its patent applications. Pulse also argues there was no unexpected result because it was obvious to combine the prior art to create Halo's design. Pulse additionally asserts that the evidence of copying or acceptance by others is due only to Halo's litigation-driven licenses. Finally, Pulse contends Halo produced no evidence Halo was proceeding contrary to conventional wisdom.

Halo responds that because Pulse failed to file a pre-verdict Motion for Judgment as a Matter of Law on obviousness, Pulse waived its right to challenge the factual basis underlying the jury's implicit findings on obviousness. Halo further argues that Pulse has not proven the asserted claims were obvious. Specifically, Halo argues that after resolving all factual disputes on obviousness in Halo's favor, the result is the conclusion that the asserted patent claims are not obvious.

The ultimate question of obviousness is a question of law based on the jury's factual findings. i4i Ltd. P'ship v. Microsoft Corp., 598 F.3d 831, 845 (Fed. Cir. 2010), aff'd 131 S. Ct. 2238 (2011). "The extent to which [the Court] may review the jury's im-

plicit factual findings depends on whether a pre-verdict [Judgment as a Matter of Law] was filed on obviousness." Id. When a party fails to file a pre-verdict Motion for Judgment as a Matter of Law under Rule 50(a) on obviousness, that party waives its right to challenge the jury's factual findings on obviousness for substantial evidence. Id. When the jury makes no explicit factual findings and returns a verdict finding only that the claims were not obvious, courts presume the jury resolved the underlying factual disputes in the patentee's favor when analyzing the ultimate legal question of obviousness. Id. at 845-46; see also Jurgens v. McKasy, 927 F.2d 1552, 1558 (Fed. Cir. 1991) ("In the absence of a proper motion for directed verdict during the trial below, the sole question for review is whether the factual story told to the jury by the verdict winner (we must assume that the jury correctly believed it) supports the legal conclusion of nonobviousness.").

A patent is invalid for obviousness "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." 35 U.S.C. § 103. Thus, when a patent "simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 417 (2007) (quotation omitted). Underlying factual considerations in an obviousness analysis include the scope and content of the prior art; teaching, suggestion, or motiva-

tion to combine elements from different prior art references; and any relevant secondary considerations. Allergan, Inc. v. Sandoz Inc., --- F.3d ----, 2013 WL 1810852, at *4 (Fed. Cir. May 1, 2013). However, although evidence of teaching, suggestion, or motivation to combine elements from different prior art references "is useful in an obviousness analysis, the overall inquiry must be expansive and flexible." Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1360 (Fed. Cir. 2012). Secondary considerations of obviousness include commercial success, a long-felt but unsolved need, failure of others to solve the problem, initial skepticism, copying and praise by others, and licensing. Allergan, 2013 WL 1810852, at *4; Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc., 699 F.3d 1340, 1350-54 (Fed. Cir. 2012). The defendant bears the burden of proving by clear and convincing evidence that the patent is obvious. Kinetic Concepts, 688 F.3d at 1360.

Here, the Court makes no factual findings on obviousness, which was the province of the jury, and considers only whether the jury's factual findings on obviousness show by clear and convincing evidence that the asserted patent claims were obvious. Pulse did not file a pre-verdict Motion for Judgment as a Matter of Law on obviousness, and thus waived the right to challenge the jury's factual findings on obviousness for substantial evidence. The jury found Pulse had not proven the patent claims were obvious, but returned no specific factual findings. (Jury Verdict (Doc. #482) at 9.) The Court therefore presumes the jury resolved all factual disputes in Halo's favor in considering whether the asserted patent claims were obvious.

A. The Prior Art

As to the scope of the prior art and its similarity to the asserted patent claims, Pulse introduced four prior art references at trial, Western Electric, Rockwell, Valor, and Akachi, which Pulse's infringement expert testified disclosed all of the asserted patent claim elements. Halo's infringement expert disagreed with Pulse's infringement expert's opinion regarding whether two of the prior art parts contained certain of the asserted patent claims' elements. (Jury Trial Tr. Day 9 (Doc. #468) at 246-50; Jury Trial Tr. - Day 10 (Doc. #479) at 116-23.) However, Halo's infringement expert ultimately agreed with Pulse's infringement expert that each of the elements present in the asserted patent claims also were present in the prior art, except the standoff element in claim 7 of the '985 patent and claim 48 of the '785 patent. (Halo's Opp'n to Pulse's Mot. For Entry of Findings of Fact & Conclusions of Law under Rule 52 (Doc. #517), Ex. A at 4-12.) Thus, even with the presumption that all factual disputes are resolved in favor of Halo, Pulse demonstrated that the prior art contained the elements for all but two of the asserted patent claims.

However, the fact that each of the elements of the asserted patent claims was independently present in the prior art does not in itself prove obviousness because the combination of elements within the prior art may not be obvious. See KSR Int'l, 550 U.S. at 418 ("A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art"). Further, the prior art relied on by Pulse at trial

was similar to the content of the prior art before the United States Patent and Trademark Office ("PTO") during the Halo patents' original prosecution and reexamination. (Jury Trial Tr. Day 9 (Doc. #468) at 229-35.) This weighs in favor of nonobviousness. See Jurgens, 927 F.2d at 1560 (finding the prior art the PTO considered was similar to the prior art the PTO did not consider when the parties disputed this fact, because the presumption of resolving all factual disputes in favor of the patentee applied).

Thus, that all the elements of the asserted claims, save two, were present in the prior art weighs in favor of obviousness. However, the fact that the PTO considered similar prior art weighs in favor of nonobviousness.

B. Motivation to Combine and Teaching Away

For motivation to combine, Pulse's infringement expert testified that it would have been obvious and logical to combine the elements of the four prior art references Pulse presented at trial to create the asserted patent claims' elements, specifically referencing the Western Electric and Akachi parts. (Jury Trial Tr. - Day 7 (Doc. #466) at 108.) Halo's infringement expert did not specifically address whether there would have been a motivation to combine the Akachi and Valor parts together or with the Western Electric or Rockwell parts. However, Halo's infringement expert testified generally that he disagreed with Pulse's infringement expert's conclusion that it would have been obvious to combine the prior art to create the asserted patent claims, and that Pulse's infringement expert was going through "a lot

of contortions to combine things." (Jury Trial Tr. - Day 9 (Doc. #468) at 251-52.) Halo's infringement expert also testified that there was nothing obvious he would have pulled from the Western Electric and Rockwell parts in defining the accused parts. (Id. at 226-[illegible].)

Additionally, a Pulse engineer testified that he did not see why the Western Electric and Rockwell parts were relevant to Pulse's accused parts.[1] (Jury Trial Tr. - day 8 (Doc. #467) at 256.) Based on this testimony by Pulse's engineer, Halo's infringement expert testified that if the Western Electric and Rockwell parts were "not relevant to someone who was on the ground at the time," the parts "can't form the basis of an obviousness combination" for that person. (Jury Trial Tr. - Day 9 (Doc. #468) at 228-29.) The jury found the accused products, except one, met the elements of the asserted patent claims. (Jury Verdict (Doc. #482) at 1-5.) Therefore, if the Western Electric and Rockwell parts were not relevant to the accused products, they were not relevant to the asserted patent claims that those products infringed, and there would be no motive to combine those parts to create the asserted patent claims. Halo presented evidence that there was no motivation to combine the prior art to create the asserted patent claims, so the Court presumes the jury resolved this fact in favor of Halo. See i4i Ltd. P'ship, 598 F.3d at 846 (finding the

---

[1] Pulse argues that this witness was not giving opinion testimony regarding obviousness. However, the Court must resolve all factual disputes in favor of Halo, and this evidence supports Halo's contention that the prior art does not show the asserted patent claims are obvious.

presumption that the jury resolved factual disputes in favor of the patentee applies to disputes about the existence of motivation to modify prior art references). Therefore, the evidence on motivation to combine the prior art to create the patented design weighs in favor of nonobviousness.

As to whether the prior art taught away from the asserted patent claims, Halo's infringement expert testified that "the work that other people were doing, the solutions that they were pursuing" was "that they were working on other things." (Jury Trial Tr. - Day 9 (Doc. #468) at 258.) Halo's infringement expert also testified that Pulse was "working on different things as opposed to the solution that ultimately was determined." (Id. at 258-59.) Therefore, presuming the jury resolved this factual issue in favor of Halo, the prior art taught away from the Halo patents. See Spectralytics, Inc. v. Cordis Corp., 649 F.3d 1336, 1343 (Fed. Cir. 2011) ("Whether the prior art teaches away from the claimed invention is a question of fact."). Consequently, teaching away also weighs in favor of nonobviousness.

C. Objective Factors of Obviousness

1. Commercial Success

Pulse argues that the commercial success of its accused products was not due to the patented design. Pulse's Director of Marketing testified there were cases where customers preferred open header or transfer molded, but the majority of customers had no preference and made a decision based on cost. (Jury Trial Tr. Day 7 (Doc. #466) at 318-20.) Pulse presented evidence that the costs for open header

parts and transfer molded parts were similar, but sometimes one type could be more expensive than the other. (Id. at 326-27.)

However, Halo presented evidence of the accused products' commercial success, and the accused products embodied Halo's invention. (Jury Trial Tr. - Day 8 (Doc. #467), at 186 (Pulse did "$250 million worth of sales 10 over ten years" of the accused products); Jury Trial Tr. Day 9, at 256 (once Pulse "began to ship accused parts, they shipped $257,000,000 worth of accused parts").) Therefore, Halo triggered the presumption that the commercial success of the accused products is due to Halo's patented invention. See J.T. Eaton & Co. v. Atl. Paste & Glue Co., 106 F.3d 1563, 1571 (Fed. Cir. 1997) ("When a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention."); Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1130 (Fed. Cir. 2000) ("[I]f the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness"). The factual dispute over the reason for the accused products' commercial success must be resolved in favor of Halo, and thus the commercial success of the accused products weighs in favor of nonobviousness.

2. Solving Long-Standing Problem

Pulse presented evidence that Halo's invention did not solve the long-standing problem of transfer

molded parts cracking at high temperatures and that others in the industry had failed to solve this problem. Specifically, Pulse presented evidence that in 1986 Pulse was selling an open bottom surface-mount transformer that could withstand a 250 degree Celsius heating process without cracking. (Jury Trial Tr. Day 6 (Doc. #465) at 227-28.) However, Halo's infringement expert testified that people in the industry knew about the cracking problem for years, at least as far back as the 1980's. (Jury Trial Tr. - Day 9 (Doc. #468), at 256-57.) Halo's infringement expert also testified that "all of the solutions, except the one proposed by Halo, failed." (Id. at 257.) The Court must presume the jury resolved this factual dispute in Halo's favor. Therefore, the factors of a long-felt but unmet need and the failure of others to solve the problem weigh in favor of nonobviousness.

3. Initial Skepticism

Pulse argues that the one instance of skepticism of Halo's invention in the industry is not enough to sway this factor in favor of Halo. Halo's Vice President and Chief Operating Officer testified that when Halo sent Hewlett Packard samples of Halo's patented surface mount transformers, Hewlett Packard was skeptical that the design would work. (Jury Trial Tr. - Day 2 (Doc. #435) at 6-7, 62.) Halo's infringement expert testified that Hewlett Packard's skepticism demonstrated initial skepticism for obviousness purposes. (Jury Trial Tr. Day 9 (Doc. #468) at 257-58.) Pulse is challenging the sufficiency of the evidence supporting skepticism, an argument which Pulse waived by failing to file a Rule 50(a) Motion on

obviousness. Therefore, the skepticism factor weighs in favor of nonobviousness.

4. Copying by Others

Pulse argues that the factor of copying by others weighs in favor of obviousness. Pulse argues that it did not copy the patented design because although it began making some open header surface-mount products after Halo patented its design, it continued to sell non-accused products, such as transfer molded surface-mount transformers. However, that Pulse did not fully move its product line from transfer molded parts to open-header parts does not change the fact that Pulse switched part of its product line to Halo's patented design after Halo patented its design, which supports an inference of copying. (Jury Trial Tr. - Day 5 (Doc. #464) at 147-48, 244.) And in any event, Halo presented evidence that Halo's patented design was copied by others in the industry.[2] Halo's Vice President of Global Sales, testified that the open construction design of Halo's patented invention was unique at first, but has since become "more common place" because some of Halo's competitors now use the open construction design. (Jury Trial Tr. Day 4 (Doc. #442) at 292.) Thus, presuming the jury resolved this factual dispute in Halo's favor, this factor weighs in favor of nonobviousness.

---

[2] Halo also argues it presented evidence the patented invention was praised, but gives no record support showing praise. Evidence that the invention was copied could support an inference that the patented design was praised. However, notwithstanding this inference, even if the Court weighed this one factor in favor of obviousness, Pulse still has not shown obviousness by clear and convincing evidence.

5. Licensing of the Patented Invention

Pulse argues that this factor weighs in favor of nonobviousness because Halo's licenses to four of Halo and Pulse's competitors for use of Halo's patented design were primarily the result of litigation. Pulse argues this is demonstrated by the testimony that one of these competitors entered into the licensing agreement to settle the lawsuit Halo had brought against the competitor. (Jury Trial Tr. Day 8 (Doc. #467) at 160-61.) However, Halo's damages expert testified that these licenses provided evidence of the value of the patents. (Jury Trial Tr. - Day 5 (Doc. #464) at 92-94.) Resolving this factual dispute in favor of Halo, the licenses provide evidence that Halo's competitors valued the claimed invention enough to pay for its use. See Transocean, 699 F.3d at 1353 (finding that, when confronted with conflicting evidence about the motivation behind licensing agreements, "a reasonable jury could have found that the licenses reflect the value of the claimed invention and are not solely attributable to litigation"). The licensing of the patented invention thus weighs in favor of obviousness.

In summary, presuming the jury resolved all factual disputes in Halo's favor, Pulse has not met its burden to show obviousness by clear and convincing evidence. It is undisputed that between the four prior art references presented by Pulse at trial, all of the claimed elements, except the standoff element in claim 7 of the '985 patent and claim 48 of the '785 patent, were present in the prior art. However, the rest of the factors weigh in favor of Halo: the PTO

considered prior art which contained the same concepts as in the prior art Pulse presented at trial, there was no motivation to combine the specific elements to make the asserted patent claims, the prior art taught away from Halo's design. Further, Halo's patented design was commercially successful, solved a long-standing problem, was initially received with skepticism, was copied by others, and was licensed to competitors. Therefore, the Court finds that based upon the jury's presumed factual findings the asserted patent claims were not obvious.

Even without the presumption that all factual disputes are resolved in Halo's favor, Pulse has not proven obviousness by clear and convincing evidence. While Pulse presented evidence of obviousness in the form of its infringement expert's opinion testimony and lay witness testimony, Halo presented countervailing evidence of nonobviousness. Thus, considering all of the evidence on obviousness from both parties, Pulse has not proven obviousness by clear and convincing evidence. The Court therefore finds the asserted patent claims are not invalid for obviousness.

II. INEQUITABLE CONDUCT

Pulse argues that Halo committed inequitable conduct before the PTO by not naming T. K. Luk ("Luk"), a former employee of a manufacturing company that worked with Halo, as an inventor of the Halo patented designs. Pulse asserts Luk was an inventor based on his testimony stating he invented the patented design, as well as a fax which shows Luk was involved in the conception of the invention.

Pulse argues that a failure to name all inventors renders a patent invalid, and therefore this was material information that should have been presented to the PTO. Pulse further contends Halo's specific intent to deceive the PTO can be inferred from the fact that the named inventors knew of Luk's contributions to the inventions and failed to name him as an inventor. Pulse also argues that specific intent to exclude Luk may be inferred from the fact that Luk left the company that worked with Halo and joined a competing company right before the first Halo patent was filed, and therefore it would have been more difficult to get a patent application filed if Luk were included in the process.

Halo responds that information relating to Luk was not material because the evidence shows Luk was not an inventor. Halo argues that this defense comes down to a credibility dispute between Luk and three of the named inventors who testified Luk was not involved in the conception of the invention. Halo further argues that Luk's testimony is implausible and undermined when compared to the named inventors' testimony. According to Halo Luk was biased against Halo because he created fake documents altering the dates of certain engineering changes to support his new employer's summary judgment motion in another lawsuit with Halo. Halo also contends that the documents Pulse offers to corroborate Luk's testimony are insufficient because one document shows only the latest date the design was conceived, and the other is an e-mail created by Luk after the named inventors filed the patent application. Halo finally argues that Pulse cannot prove specific intent to deceive the PTO because the only

proper inference that can be drawn from the facts is that the named inventors did not mention Luk because he was not an inventor.

"Patent applicants have a duty to prosecute patent applications in the Patent Office with candor, good faith, and honesty." Symantec Corp. v. Computer Assocs. Int'l, Inc., 522 F.3d 1279, 1296 (Fed. Cir. 2008) (quotation omitted). "A breach of this duty constitutes inequitable conduct and renders the entire patent unenforceable." Id. To prevail on a claim of inequitable conduct, the accused infringer must prove by clear and convincing evidence that the applicant (1) knew the information was material and (2) made a deliberate decision to withhold the information to deceive the PTO. Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1290 (Fed. Cir. 2011) ("To prevail on a claim of inequitable conduct, the accused infringer must prove that the patentee acted with the specific intent to deceive the PTO.").

As to the first element, generally, "the materiality required to establish inequitable conduct is but-for materiality." Id. at 1291. However, there is an exception for "affirmative acts of egregious misconduct, such as the filing of an unmistakably false affidavit," which are always considered material. Id. at 1292. For example, the identity and disclosure of all inventors is a material fact that would affect whether the PTO would allow the claim. See PerSeptive Biosystems, Inc. v. Pharmacia Biotech, Inc., 225 F.3d 1315, 1321 (Fed. Cir. 2000) ("As a critical requirement for obtaining a patent, inventorship is material."); 35 U.S.C. § 115 ("An application for patent . . . shall include, or be amended to include, the name of the in-

ventor for any invention claimed in the application."). A party asserting prior or co-inventorship must proffer evidence corroborating the testimony of the prior or coinventor. Singh v. Brake, 317 F.3d 1334, 1340-41 (Fed. Cir. 2003). "[W]hether a putative inventor's testimony has been sufficiently corroborated is determined by a rule of reason analysis, in which an evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the inventor's story may be reached." Id. at 1341. Corroborating evidence may take many forms, such as "records made contemporaneously with the inventive process," or "circumstantial evidence of an independent nature." Gemstar-TV Guide Int'l, Inc. v. Int'l Trade Comm'n, 383 F.3d 1352, 1382 (Fed. Cir. 2004).

For the second element of inequitable conduct, "to meet the clear and convincing evidence standard, the specific intent to deceive must be the single most reasonable inference able to be drawn from the evidence." Therasense, 649 F.3d at 1290 (quotation omitted). "Indeed, the evidence must be sufficient to require a finding of deceitful intent in the light of all the circumstances." Id. at 1290 (quotation and emphasis omitted). Thus, "when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found." Id. at 1290-91. Even if the accused infringer proves the elements of inequitable conduct by clear and convincing evidence, "[t]he ultimate determination of inequitable conduct is committed to the sound discretion of the trial court." Dippin' Dots, Inc. v. Mosey, 476 F.3d 1337, 1345 (Fed. Cir. 2007).

Here, Pulse argues that a preponderance of the evidence standard should apply, stating that the issue is "whether the PTO would have rejected the claims based on the nondisclosure of Mr. Luk, which is addressed under the preponderance of the evidence standard." (Pulse's Reply in Support of Def.'s Mot. For Entry of Findings of Fact & Conclusions of Law (Doc. #518) at 12-13 (emphasis omitted).) The preponderance of the evidence standard applies in the determination of but-for materiality for failure to disclose prior art to the PTO. Therasense, 649 F.3d at 1291-92 (stating courts must apply the preponderance of the evidence standard when determining "whether the PTO would have allowed the claim if it had been aware of the undisclosed reference"); see also Manual of Patent Examining Procedure § 706 ("an examiner should reject a claim if, in view of the prior art and evidence of record, it is more likely than not that the claim is unpatentable"). As explained previously, however, inventorship is material, and therefore this preponderance of the evidence standard does not apply because a patent would not be issued if all of the inventors were not named on the application. Thus, the issue here is whether Pulse has shown Luk was an inventor that needed to be disclosed, which Pulse must prove by clear and convincing evidence. Even assuming Pulse needs to show this by only a preponderance of the evidence, Pulse has not met its burden to show Luk was an inventor that should have been disclosed.

Luk testified that he was the inventor of the patented design. (Jury Trial Tr. - Day 8 (Doc. #467) at 99, 103-05, 114 (Luk testifying that "[s]ome or all of the inventions claimed in the Halo patents were

derived from work in which I was involved" and that he could not believe he was not named on the patents because "this is my design").) Luk testified that he came up with the open header design to solve the cracking problem, he drew up the sketch on a white-board in his engineering room, and he conveyed his idea to his engineers. (Id. at 102-03.)

However, Pulse failed to sufficiently corroborate Luk's testimony. Pulse argues that a fax between Luk and the named inventors contains the only evidence of conception of Halo's claimed invention and shows Luk was involved as an inventor. (Jury Trial Tr. – Day 2 (Doc. #435) at 50-57, 162-63, 169; Pl.'s Trial Ex. 123.) However, this fax does not corroborate Luk's testimony because it merely indicates Luk and Halo's President engaged in fax communications containing a drawing of the patented design. (Pl.'s Trial Ex. 123.) Furthermore, three of the six named inventors who testified at the trial explained that the drawing on the fax is what would have been sent to a tool manufacturer to make the mold for the product, or a "tooling drawing." (Jury Trial Tr. - Day 2 (Doc. #435) at 50, 237; Jury Trial Tr. Day 4 (Doc. #442) at 207-08.) They further testified that Luk would have been sent the tooling drawing because he was in charge of manufacturing parts and would have needed the new design for manufacturing purposes, not because he was involved in the design process. (Jury Trial Tr. - Day 2 (Doc. #435) at 52, 56, 240-41; Jury Trial Tr. Day 4 (Doc. #442) at 207-09.) This testimony undermines Pulse's claims that Luk's name appearing on the fax shows he was involved in the designing process, to the extent that the fax pro-

vides any corroboration for Luk's assertion that he was an inventor.

Pulse also argues an e-mail sent by Luk in 1996 corroborates his testimony that he was an inventor. (Def.'s Trial Ex. 540.) Luk sent the e-mail to his supervisor at the company he went to work for after Halo. (Id.) In the e-mail, Luk expressed that he felt upset about being informed that Halo had warned that it would sue Luk's new employer if they continued to use Halo's patented design because Luk was the "only one to design this SMD case when I was in PBL/Halo and today I was told I could not use this design even with my own tooling." (Id.) However, this e-mail also does not corroborate Luk's testimony that he was an inventor because it was Luk's own statement made after the invention was completed in reaction to a threat of a lawsuit. See Singh, 317 F.3d at 1340-41 ("Evidence of the inventive facts must not rest alone on the testimony of the inventor himself.").

Furthermore, three of the named inventors testified at trial that Luk was not an inventor of Halo's patented design and did not contribute at all to the ideas that became the Halo patents. (Jury Trial Tr. Day 2 (Doc. #435) at 57, 193-94, 240-41; Jury Trial Tr. Day 4 (Doc. #442) at 209.) These three named inventors also testified that the conception of the invention occurred during multiple "brainstorming sessions" that occurred over the course of several months, which included only the six inventors named on the patents. (Jury Trial Tr. - Day 2 (Doc. #435) at 35-39, 221-30; Jury Trial Tr. Day 4 (Doc. #442) at 203-07.) Each of the three named inventors who tes-

tified told consistent stories about the conception process and who was involved.

Halo also presented an e-mail from Luk, for the limited purpose of showing Luk's bias against Halo, which stated Luk would ask a co-worker to "make some fake documents" in response to his current employer's request for documents relating to a lawsuit between his current employer and Halo. (Jury Trial Tr. Day 8 (Doc. #467) at 49, 152; Pl.'s Trial Exs. 413, 414). Thus, based on the lack of evidence corroborating Luk's testimony, as well as the evidence of Luk's bias against Halo, Pulse has not proven, by clear and convincing evidence or a preponderance of the evidence, that Luk was an inventor. Therefore, the named inventor's failure to name Luk as an inventor was not material.

Because Pulse has not met its burden to show failing to name Luk as an inventor was material, Pulse also has failed to meet its burden to show Halo specifically intended to deceive the PTO by not including Luk as an inventor. The Court therefore finds Pulse has failed to prove Halo committed inequitable conduct in not naming Luk as an inventor.

III. EQUITABLE ESTOPPEL

Pulse argues that Halo should be estopped from enforcing its patents against Pulse because its conduct misled Pulse to reasonably believe Halo did not intend to enforce its patents against Pulse, resulting in prejudice to Pulse. Pulse argues that Halo's President testified he believed Pulse infringed at the time Halo sent Pulse letters in 2002 about

Pulse's accused products and Halo's patents. However, the letters contained no allegations of infringement, which Pulse argues misled it into believing Halo did not intend to assert a claim of infringement. Pulse also argues it relied on Halo's misleading conduct because after receiving the letter and before Halo brought suit, Pulse developed, marketed, and sold millions of dollars' worth of accused products. Pulse also asserts it would have brought a declaratory judgment action against Halo it if knew Halo was going to assert an infringement suit. Pulse additionally argues it has suffered evidentiary prejudice because of the death of a key witness, as well as economic prejudice because Halo deliberately delayed bringing suit to increase its damages.

Halo responds that Pulse has not proven Halo misled Pulse to believe Halo did not intend to enforce its patents because the 2002 letters would lead a reasonable person to believe Halo was enforcing its patent rights through attempted licensing. Halo argues Pulse fails to prove reliance because no Pulse witness testified that Pulse made the decision to continue selling the accused products based on the letters. Halo further submits Pulse's contention at trial that it continued to sell the accused products after it had done an internal invalidity analysis is inconsistent with reliance on the letters and Halo's silence, and therefore undermines any argument in favor of reliance. Halo also contends Pulse's assertion that it would have instituted a declaratory judgment action if it would have known Halo was going to allege infringement is speculation unsupported by the evidence. Finally, Halo argues Pulse cannot prove either evidentiary prejudice because the death of the

witness occurred after Halo filed suit, or economic prejudice because Pulse did not stop selling the accused products when this lawsuit was filed and Pulse opposes a permanent injunction that would force Pulse to switch to an alternative design.

"Equitable estoppel is an equitable defense to infringement and may serve as an absolute bar to a patentee's claim of infringement." Scholle Corp. v. Blackhawk Molding Co., 133 F.3d 1469, 1471 (Fed. Cir. 1998). To support a defense of equitable estoppel in the patent context, a defendant must show (1) "the patentee, through misleading conduct, led the alleged infringer to reasonably believe that the patentee did not intend to enforce its patent against the infringer," (2) the alleged infringer relied on the patentee's misleading conduct, and (3) "due to its reliance, the alleged infringer would be materially prejudiced if the patentee were permitted to proceed with its charge of infringement." Aspex Eyewear Inc. v. Clariti Eyewear, Inc., 605 F.3d 1305, 1310 (Fed. Cir. 2010). The preponderance of the evidence standard applies, "absent special circumstances, such as fraud or intentional misconduct." A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1046 (Fed. Cir. 1992).

As to the first element, "[m]isleading conduct may include specific statements, action, inaction, or silence when there was an obligation to speak." Aspex, 605 F.3d at 1310 (quotation marks omitted). However, the patentee's inaction "must be combined with other facts respecting the relationship or contacts between the parties to give rise to the necessary inference that the claim against the defendant

is abandoned." Aukerman, 960 F.2d at 1042. For example, a party threatening immediate or vigorous enforcement of its patent rights then delaying its claim for an unreasonably long time may be estopped from pursuing its claim. Meyers v. Asics Corp., 974 F.2d 1304, 1309 (Fed. Cir. 1992). But "a suggestion of infringement coupled with an offer to license followed by silence" is probably insufficient to establish misleading conduct for estoppel purposes. Id. at 1308. (quotation omitted).

Secondly, an alleged infringer ignoring or giving little weight to a patentee's offer to negotiate licenses may be evidence that the alleged infringer did not rely on the patentee's conduct. Id. at 1309. The accused infringer must show "it substantially relied on the misleading conduct of the patentee in connection with taking some action." Aukerman, 960 F.2d at 1042-43. Essentially, "the infringer must have had a relationship or communication with the plaintiff which lulls the infringer into a sense of security in going ahead with [its infringing conduct]." Id. at 1043.

As to the final element, prejudice can be evidentiary or economic. Id. Evidentiary prejudice arises when key witnesses or documentary evidence is lost or witnesses' memories lessen because of the plaintiff's unreasonable delay. Meyers, 974 F.2d at 1308. Economic prejudice "may be shown by a change of economic position flowing from actions taken or not taken by the patentee." Aspex, 605 F.3d at 1312. However, the alleged infringer must prove that any increased expenditure is related to the actions taken by the patentee, and not merely a business decision.

Gasser Chair Co. v. Infanti Chair Mfg. Corp., 60 F.3d 770, 774 (Fed. Cir. 1995).

Whether to apply equitable estoppel is committed to the sound discretion of the trial court. Aukerman, 960 F.2d at 1041. When "deciding whether to bar the suit on estoppel grounds, the court must consider all evidence relevant to the equities." Aspex, 605 F.3d at 1310. "[E]quitable estoppel is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules." Aukerman, 960 F.2d at 1041.

Here, Pulse has not shown misleading conduct by Halo. The first letter Halo's attorneys sent to Pulse in 2002 informed Pulse that Halo had surface mount packaging patents, stated "Halo is interested in licensing these patents, and would like to solicit your company's interest in entering into negotiations for the license of these patented technologies," and requested an answer from Pulse by the end of the month. (Pl.'s Trial Ex. 91.) The second letter, sent one month later, states that there "is reason to believe" Pulse is manufacturing products that "may possess features similar to those embodied in [Halo's patents]," that Halo had not reached "any conclusive determinations" as to whether Pulse was infringing, but rather was "devoting its energy to working out suitable arrangements with companies that would benefit from licensing Halo's patented technologies," such as Pulse. (Pl.'s Trial Ex. 92.) Neither of these letters threaten immediate or vigorous enforcement of Halo's patents, or even affirmatively allege infringement. Thus, Halo's silence after sending the second letter, at least until suit was brought, does

not establish misleading conduct by Halo that demonstrated to Pulse that Halo was abandoning a potential claim of infringement. See Meyers, 974 F.2d at 1305-06, 1309 (finding a letter that was an invitation to enter into a business relationship and did not threaten litigation or communicate acquiescence to the infringement, combined with silence until the patentee filed suit, was not misleading conduct).

Pulse's contention that Halo believed that Pulse infringed at the time Halo's attorney sent the letters but did not say so in the letters does not show misleading conduct. Halo's President testified that at the time Halo's attorney sent the 2002 letters he believed that Pulse was infringing the Halo patents. (Jury Trial Tr. - Day 4 (Doc. #442) at 259.) However, Pulse has presented no evidence that Pulse was aware of this fact prior to the commencement of this litigation, and thus Pulse could not have been misled by Halo's belief that Pulse did in fact infringe.

Additionally, Pulse's argument that the letters may show Halo had decided Pulse did not infringe also does not show misleading conduct. Pulse's Chief Operating Officer testified that the second letter may suggest Halo performed an infringement analysis and determined that Pulse did not infringe. (Jury Trial Tr. Day 6 (Doc. #465) at 48.) However, the standard for misleading conduct in a case where there is communication and then silence is not whether the conduct was ambiguous, but whether the conduct threatened immediate or vigorous enforcement of an infringement claim followed by a long period of silence that indicated the patentee

would not be enforcing the claim. Meyers, 974 F.2d at 1309. Thus, based on the two letters, which contained no accusation of infringement, followed by Halo's silence, it was not reasonable for Pulse to infer that Halo did not intend to enforce its patents against Pulse. Pulse has not established that Halo's conduct misled Pulse, and therefore Pulse cannot prove equitable estoppel. The Court finds Pulse has not proven Halo should be equitably estopped.

IV. LACHES

Pulse argues that under the doctrine of laches the Court should bar relief for any damages that occurred before this litigation commenced. Pulse argues that the evidence demonstrates Halo delayed bringing suit for an unreasonable and inexcusable amount of time after Halo knew or should have known of its claims against Pulse. Pulse argues that Halo's purpose in delaying was to accrue a higher amount of damages. Pulse also argues it suffered material economic and evidentiary prejudice as a result of that delay.

Halo responds that Halo's four and a half year delay was not unreasonable given the circumstances. Particularly, Halo had sent letters to several potential infringers and was taking steps to enforce its claims of infringement by filing suit against one company in 2003. Halo also argues that the terminal illness and death of Halo's President's wife interrupted Halo's infringement suits, and once Halo resumed its enforcement actions it took a while to find proper counsel and file suit against Pulse. Halo finally argues Pulse suffered no prejudice for the same

reasons as it did not suffer prejudice under equitable estoppel.

"The application of the defense of laches is committed to the sound discretion of the district court." Aukerman, 960 F.2d at 1032. To prove laches, a defendant must show that the plaintiff delayed filing suit for an "unreasonable and inexcusable length of time after the plaintiff knew or reasonably should have known of its claim against the defendant; and . . . the delay resulted in material prejudice or injury to the defendant." Wanlass v. Gen. Elec. Co., 148 F.3d 1334, 1337 (Fed. Cir. 1998) (quotation omitted).

"The length of time which may be deemed unreasonable has no fixed boundaries but rather depends on the circumstances." Aukerman, 960 F.2d at 1032. Generally, "[t]he Circuit has pronounced a three or four-year delay unreasonable only when that delay was accompanied by extraneous improper tactics or misleading conduct by the plaintiff." IXYS Corp. v. Advanced Power Tech., Inc., 321 F. Supp. 2d 1156, 1163 (N.D. Cal. 2004) (citing MCV, Inc. v. King-Seeley Thermos Co., 879 F.2d 1568, 1572 (Fed. Cir. 1989); Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1550 (Fed. Cir. 1984)). For example, a plaintiff co-inventor telling a patentee that he had no interest in possessing rights in the patent, then later bringing suit to be named on the patent was misleading conduct. MCV, 879 F.2d at 1572. A delay of more than six years raises a presumption that the delay is unreasonable. Wanlass, 148 F.3d at 1337. Material prejudice may be established by showing economic or evidentiary prejudice. Id.

Pulse does not argue the six year presumption applies, and the Court finds no evidence to show Halo knew or should have known of Pulse's infringement more than six years before Halo filed suit against Pulse. Id. ("The period of delay begins at the time the patentee has actual or constructive knowledge of the defendant's potentially infringing activities.") Thus, the burden rests on Pulse to prove Halo's delay was unreasonable and inexcusable and that Pulse suffered material prejudice as a result of that delay.

Pulse has not shown that Halo delayed filing suit for an unreasonable and inexcusable length of time. Halo accused multiple companies of infringement, and addressed each infringer one by one. Furthermore, Halo's President's wife fell terminally ill soon after Halo began its patent enforcement activities in 2003, and passed away in 2005, which further shows Halo's delay was reasonable given that Halo is a small company. (Jury Trial Tr. Day 4 (Doc. #442) at 264-65.) Finally, Halo's President credibly testified that after his wife passed away and he resumed running Halo, it took a couple of years to find a lawyer who would take the case on contingency, which further explains Halo's delay in bringing suit. (Id. at 263.)

Pulse argues that Halo delayed suit because it knew it could not get damages, as demonstrated by an e-mail sent from Halo's President to Halo's Vice President and engineer. This e-mail, referred to by Pulse as Defendant's Trial Exhibit 588, was not admitted at trial and is not included in the Motions now before the Court. However, even if the e-mail

were properly before the Court, its does not demonstrate Halo's delay was unreasonable and inexcusable, or for an improper purpose. While this e-mail may show Halo may have had an incentive to wait and file suit after damages accrued, the weight of the evidence shows that Halo had legitimate and reasonable justifications for not bringing suit earlier. The Court therefore finds Pulse has not proven that laches should bar Halo relief for damages that occurred before Halo filed suit.

V. WILLFULNESS

Halo argues it has shown by clear and convincing evidence that Pulse willfully infringed. Halo argues that many of Pulse's defenses were disposed of on summary judgment or have been abandoned, and that the defenses Pulse relied on at trial were unreasonable. Therefore, Halo concludes that Pulse acted despite an objectively high risk that it was infringing, and thus acted willfully. Pulse responds that because there were triable issues as to both invalidity and infringement, Halo cannot prove willful infringement. Pulse argues that it consistently relied on its reasonable defense of invalidity for obviousness, which was not a sham defense.

To prove willfulness, the patentee must prove by clear and convincing evidence both an objective and subjective element of willfulness. Bard Peripheral Vascular, Inc. v. W.L. Gore & Assoc., Inc., 682 F.3d 1003, 1005 (Fed. Cir. 2012). The first prong is objective recklessness, which is a threshold inquiry decided by the Court as a question of law. Id. at 1007-08. To prove objective recklessness, the patent-

ee must show "by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent." Id. at 1005. The determination of objective recklessness "entails an objective assessment of potential defenses based on the risk presented by the patent." Id. at 1006. Thus, the objective recklessness prong "tends not to be met where an accused infringer relies on a reasonable defense to a charge of infringement." Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc., 620 F.3d 1305, 1319 (Fed. Cir. 2010); Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1310 (Fed. Cir. 2011) (noting if an accused infringer's position "is susceptible to a reasonable conclusion of no infringement," then the objective prong of willfulness is not met). Whether a defense is reasonable is a legal issue for the Court, even when the jury decides the underlying factual questions, such as for obviousness.[3] Bard, 682 F.3d at 1007.

If the Court determines the asserted patent defenses were not reasonable, and therefore there was an objectively high risk of infringement, the Court reviews a jury's subjective willfulness finding for substantial evidence. Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348,

---

[3] Halo argues that Pulse failed to file a Rule 50(a) Motion on the subjective element of willfulness and therefore the Court must resolve all factual issues on willfulness in favor of Halo. However, the Court determines the reasonableness of the defenses in light of all of the evidence, and is not bound by the factual findings of the jury for the objective determination of willfulness. Bard, 682 F.3d at 1007-08.

1357 (Fed. Cir. 2013). The patentee must demonstrate that "this objectively-defined risk . . . was either known or so obvious that it should have been known to the accused infringer." Bard, 682 F.3d at 1006 (quotation omitted). However, if there is no objectively high risk of infringement, there can be no willful infringement, even if the jury found the subjective prong was met. Spine Solutions, 620 F.3d at 1319.

Here, Halo has not proven by clear and convincing evidence that Pulse acted despite an objectively high risk of infringement. Halo argues the evidence at trial demonstrates that Pulse acted objectively recklessly, citing the Court's grant of summary judgment in favor of Halo finding the H0022 group of Pulse's accused parts infringed claim 1 of the '720 patent, Pulse's infringement expert's testimony that he was not offering non-infringement defenses for certain product groups and claims, and a Pulse representative's concession that if the patents were found valid then Pulse would be infringing certain claims. (Order (Doc. #300) at 51; Jury Trial Tr. - Day 7 (Doc. #466) at 204-05; Jury Trial Tr. - Day 8 (Doc. #467) at 16.) Halo further argues the fact that some of Pulse's defenses were disposed of on summary judgment, such as Pulse's invalidity defense under the "on-sale" bar of 35 U.S.C. § 102(b), is strong evidence of objective recklessness. (Order (Doc. #300) at 25-30.)

However, even though Pulse conceded infringement of some claims and some of Pulse's defenses failed at summary judgment, Pulse also asserted and consistently relied on defenses that ulti-

mately were presented at trial, including its defense of invalidity for obviousness. (Jury Verdict at 9-10.) Although the jury ultimately rejected all of Pulse's defenses, Pulse reasonably relied on at least its obviousness defense. (Id.) Pulse's evidence on obviousness consisted of its infringement expert's testimony that the prior art disclosed each element of the asserted patent claims, that it would have been obvious and predictable to combine and modify the prior art references to create the asserted patent claims, and that there were differences between the prior art before the PTO and the prior art Pulse introduced at trial. Pulse also presented evidence of the secondary considerations of obviousness, such as that the commercial success of the patented design was tied to litigation-driven licenses, that there was only a single instance of skepticism by one of Halo's potential customers, and that Pulse already had solved the problem of cracking due to exposure to high heat years before the Halo invention.

Pulse did not prove obviousness by clear and convincing evidence, but presented enough evidence of obviousness such that this defense was not objectively baseless, or a "sham." See Bard, 682 F.3d at 1007 (stating that a suit is a sham if it was "objectively baseless in the sense that no reasonable litigant could realistically expect success on the merits"). Pulse reasonably relied on its obviousness defense, and it did not act in the face of an objectively high likelihood that Pulse was infringing. See Spine Solutions, 620 F.3d at 1319 (finding, despite the jury's implicit finding that one of skill in the art would not have found the combination obvious based on the prior art, that the infringer raised a substantial

question as to obviousness and therefore was not objectively reckless in relying on that ultimately unsuccessful defense).

Halo argues Pulse's actions demonstrate objective recklessness. Halo submits that Pulse learned of Halo's patents as early as 1998, but did nothing to determine whether Pulse was infringing the patents. Halo further contends that after receiving Halo's letters in 2002, Pulse did not make a conscious decision that it was permissible for Pulse to continue selling the accused products. Halo argues that although a Pulse engineer conducted a "cursory" invalidity analysis and determined the patents were invalid, there was no evidence that a decision maker at Pulse relied on that engineer's analysis to make a decision to continue selling the accused products. This evidence, however, does not undermine Pulse's reasonable obviousness defense, and are facts relevant to the subjective element of infringement.

Halo has not proven by clear and convincing evidence that Pulse acted despite an objectively high likelihood that its actions constituted infringement of a valid patent. Therefore, the Court finds in favor of Pulse on willfulness, and concludes that Pulse did not willfully infringe Halo's asserted patent claims.

VI. CONCLUSION

Pulse has not met its burden to prove the asserted patent claims are obvious. Pulse also has not met its burden to show Halo committed inequitable conduct before the PTO, that Halo should be equitably estopped from enforcing the claims, or that Halo

should be barred under laches from collecting damages incurred prior to the filing of this lawsuit. Similarly, Halo has not met its burden to show Pulse willfully infringed the asserted patent claims. The Court therefore finds that Judgment should be entered in favor of Halo and against Pulse, with the exception of the issue of willfulness.

IT IS SO ORDERED.

DATED: May 28, 2013

PHILIP M. PRO
United States District
Judge

APPENDIX C

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEVADA

HALO ELECTRONICS, INC., Plaintiff, v. PULSE ELECTRONICS, INC. and PULSE ELECTRONICS CORPORATION, Defendants.	C.A. No. 2:07-CV-00331-PMP-PAL

ORDER

Presently before the Court is Defendants' Motion for Partial Summary Judgment of Non-Infringement (Doc. #239), filed on December 22, 2010. Plaintiff filed a Response (Doc. #257), on January 13, 2011. Defendants filed a Reply (Doc. #274), on January 31, 2011.

Also before the Court is Plaintiff's Motion for Partial Summary Judgment of Infringement (Doc. #244), filed on December 22, 2010. Defendants filed a Response (Doc. #264) on January 13, 2011. Plaintiff filed a Reply (Doc. #270) on January 31, 2011. Also before the Court is Plaintiff's Motion for Partial Summary Judgment of No Invalidity (Doc. #240), filed on December 22, 2010. Defendants filed a Re-

sponse (Doc. #261), on January 13, 2011. Plaintiff filed a Reply (Doc. #271), on January 31, 2011. Also before the Court is Defendants' Motion for Summary Judgment of Invalidity (Doc. #250), filed on December 22, 2010. Plaintiff filed a Response (Doc. #256), on January 13, 2011. Defendants filed a Reply (Doc. #273), on January 31, 2011.

Also before the Court is Defendants' Motion for Summary Judgment on Equitable Estoppel, Laches, and Failure to Give Notice under 35 U.S.C. § 287(a) (Doc. #249), filed on December 22, 2010. Plaintiff filed a Response (Doc. #258), on January 13, 2011. Defendants filed a Reply (Doc. #275), on January 31, 2011.

Also before the Court is Defendants' Motion for Summary Judgment of No Liability for Defendants' Sales Activity Outside of North America (Doc. #251), filed on December 22, 2010. Plaintiff filed a Response (Doc. #251), on January 13, 2011. Defendants filed a Reply (Doc. #276), on January 31, 2011.

Also before the Court is Plaintiff's Motion to Strike Pulse's New Summary Judgment Argument in Reply and to Amend the Parties' September 2010 Stipulation (Doc. #279), filed on February 2, 2011. Defendants filed a Response (Doc. #281), on February 22, 2011. Plaintiff filed a Reply (Doc. #283), on March 4, 2011.

I. BACKGROUND

This is a patent infringement action brought by Plaintiff Halo Electronics, Inc. ("Halo") against

Defendants Pulse Engineering, Inc. and Technitrol, Inc. (collectively "Pulse"). Halo owns a family of patents that relate to a design for a surface-mount package and are denoted by U.S. Patent Nos. 5,656,985 ("'985 Patent"); 6,297,720 ("'720 Patent"); and 6,344,785 ("'785 Patent") (collectively the "Halo Patents"). (Pl.'s Opp'n Mot. for Summ. J. Non-Infringement ["Opp'n Non-Infringement"] (Doc. #257).) The three patents stem from the '985 Patent application filed on August 10, 1995. (Id., Ex. 57.)

The Halo Patents name six individuals as inventors, three employees of Halo and three employees of Halo's Hong Kong based manufacturer, Perfect Brave Limited ("PBL"). (Decl. of James Heaton (Doc. #243) ["12/22/2010 Heaton Decl."] at ¶ 2.) Once the open construction design of the surface-mount package had been conceived, two of the inventors, Halo employees Jeff and James Heaton, were eager to see if the new design could withstand high temperatures without cracking. (Id. at ¶ 3.) Halo thus obtained what it contends were prototypes samples for high temperature testing from PBL. (Id.) An August 5, 1994 invoice from PBL to Halo shows that PBL sent 50 "samples" of each of the new prototypes to Halo, with Halo receiving the samples no earlier than August 8, 1994. (Decl. of Craig Countryman ["Countryman Decl."] (Doc. #248), Ex. 10). The invoice shows charges for the parts denoted as samples for $300. (Id.)

Halo did not have an industrial, high temperature oven at its U.S. facilities like the type used by its customers, so Jeff and James Heaton performed tests of the prototypes by exposing them to heat in

their home ovens at the highest temperature possible. (12/22/2010 Heaton Decl. at ¶ 4.) They also placed control parts under the same conditions to observe if the new design was indeed better. (Id.)

In July 2002, counsel for Halo sent then Pulse President John Kowalski a letter stating in part:

> We are writing on behalf of Halo . . . to notify you of certain surface mount packaging patents the company has recently acquired, copies of which are enclosed for your reference. Halo is interested in licensing these patents, and would like to solicit your company's interest in entering into negotiations for the license of these patented technologies.

(Defs.' Mot. for Summ. J. Equitable Estoppel, Laches, & Failure to Mark ["MSJ Estoppel"] (Doc. #249), Ex. 7.) On August 6, 2002, counsel for Halo sent another letter stating:

> There is reason to believe that surface mount products manufactured by your Company which are not transfer molded construction may possess features similar to those embodied in the patented devices described in Halo's patents previously provided to you. Halo has not yet reached any conclusive determinations as to whether your company's products are covered by its patents; rather Halo is devoting its energy to working out suitable ar-

> rangements with companies that would benefit from licensing Halo's patented technologies.

(Id., Ex. 8.)

Halo brought an infringement complaint on March 15, 2007, alleging that Pulse sells surface mount packages which infringe on the Halo Patents. (Compl. (Doc. #1).) Based on product drawings and part to drawing information produced by Pulse, Pulse and Halo have agreed to arrange products in groups to be represented by the following eleven products: H0022; H0009; H1260; 23Z110SMNL; H6502NL; H1305; H1174; H0026; PE-5762QNL; H0019; and PE-67540NL. (Stip. Regarding Representative Products (Doc. #217), Ex. A.)

On June 14, 2010, this Court entered an Order construing the disputed claim terms of the Halo Patents and ordered Halo to limit its selection to fifteen asserted claims. (Order Claim Construction ["Claim Construction"] (Doc. #194).) On June 28, 2010, pursuant to this Court's Order, Halo limited its assertions against Pulse to the following claims: Claims 1, 2, 3, 7, 8, and 16 of the '985 Patent; Claims 1 and 6 of the '720 Patent; and Claims 1, 2, 18, 26, 40, and 48 of the '785 Patent (the "Asserted Halo Claims"). (Pl.'s Selection of Proposed Asserted Claims (Doc. #196).)

The parties now bring several motions and cross-motions for summary judgment regarding infringement; invalidity; equitable estoppel, laches, and failure to mark; and liability for sales outside of

North America. The Court will analyze each of these motions below.

II. SUMMARY JUDGMENT STANDARD

Summary judgment is appropriate if the pleadings, depositions, answers to interrogatories and admissions, and affidavits demonstrate "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). A fact is "material" if it "might affect the outcome of the suit under the governing law." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). An issue is genuine if "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Id. Where a party fails to offer evidence sufficient to establish an element essential to its case, no genuine issue of material fact can exist, because "a complete failure of proof concerning an essential element of the nonmoving party's case necessarily renders all other facts immaterial." Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986).

The party "seeking summary judgment bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of 'the pleadings . . .' which it believes demonstrate the absence of a genuine issue of material fact." Id. at 323 (quotation omitted). The burden then shifts to the non-moving party to go beyond the pleadings and set forth specific facts demonstrating there is a genuine issue of material fact for trial. Fairbank v. Wunderman Cato Johnson, 212 F.3d 528, 531 (9th Cir. 2000). The Court views all evidence in the light most favorable to the non-moving

party. County of Tuolumne v. Sonora Cmty. Hosp., 236 F.3d 1148, 1154 (9th Cir. 2001).

III. INFRINGEMENT/NON-INFRINGEMENT (Doc. #244 and #239)

Determination of infringement is a two step process. First, the court determines the meaning and scope of the asserted patent claims. Claim language is construed with its ordinary and customary meaning, "the meaning that the [language] would have to a person of ordinary skill in the art in question at the time of the invention." Phillips v. AWH Corp., 415 F.3d 1303, 1312-13 (Fed. Cir. 2005). The court then determines whether all of the claim limitations are present, either literally, or by equivalent, in the accused device. Innovention Toys, LLC v. MGA Entm't, Inc., 673 F.3d 1314, 1318-19 (Fed. Cir. 2011). "[A]n accused product or process is not infringing unless it contains each limitation of the claim, either literally or by an equivalent." Freedman Seating Co. v. Am. Seating Co., 420 F.3d 1350, 1358 (Fed. Cir. 2005).

"The doctrine of equivalents prohibits one from avoiding infringement liability by making only 'insubstantial changes and substitutions . . . which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law.'" Siemens Med. Solutions USA, Inc. v. Saint-Gobain Ceramics & Plastics, Inc., 637 F.3d 1269, 1279 (Fed. Cir. 2011) (quoting Graver Tank & Mfg. Co. v. Linde Air Prods., 339 U.S. 605, 607 (1950)). "Under the doctrine of equivalents, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the

elements of the accused product or process and the claimed elements of the patented invention." Freedman, 420 F.3d at 1357. The doctrine of equivalents must be applied to each element of a claim, not the patented invention as a whole, therefore each element of a patent must have an equivalent for infringement to be found. Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997).

The main inquiry under a theory of equivalents is the "function-way-result test," which asks "whether an element of an accused product performs substantially the same function in substantially the same way to obtain the same result as an element of the patented invention." Siemens Med. Solutions, Inc, 637 F.3d at 1279. The interchangeability of substitutes for an element of a patent has bearing on whether the accused device is substantially the same as the patented invention. Warner-Jenkinson Co., Inc., 520 U.S. at 36. However, the interchangeability of components must be known to one skilled in the art at the time of the patent and "[i]ndependent experimentation by the alleged infringer would not always reflect upon . . . whether a person skilled in the art would have known of the interchangeability." Id. Further, the patentee may not assert a theory of equivalence that would render a particular claim element without meaning. Id. at 39 n.8. Additionally, under the theory of prosecution history estoppel, "a patentee may not seek to recapture as an equivalent subject matter surrendered during prosecution." Trading Tech. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1355 (Fed. Cir. 2010).

Courts have refused to apply the doctrine of equivalents where "the accused device is the antithesis of the claimed structure." Planet Bingo, LLC v. GameTech Int'l, Inc., 472 F.3d 1338, 1345 (Fed. Cir. 2006) (finding no infringement where the doctrine of equivalents would need to change the claim language from "before" to "after"). Likewise, infringement was not found under the doctrine of equivalents where an accused product contained a minority of adhesive strips where the claim called for a majority, an unmounted computer compared to the claim language of a mounted computer, or elongated slots within, rather than on top of, the claimed container. Moore U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091, 1106 (Fed. Cir. 2000); Asyst Tech., Inc. v. Emtrak, Inc., 402 F.3d 1188, 1195 (Fed. Cir. 2005); Sage Prod., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1425-26 (Fed. Cir. 1997).

A court "may determine infringement on summary judgment when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." Innovention Toys, 637 F.3d at 1319. However, "[b]ecause infringement under the doctrine of equivalents often presents difficult factual determinations," summary judgment often is not appropriate" Leggett & Platt, Inc. v. Hickory Springs Mfg. Co., 285 F.3d 1353, 1360 (Fed. Cir. 2002). Conflicting expert testimony can create a genuine issue of material fact sufficient to avoid summary judgment. LG Elec., Inc. v. Bizcom Elec., Inc., 453 F.3d 1364, 1376 (Fed. Cir. 2006); see also Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1269 (Fed. Cir. 1999) (expert's report was sufficient to create

genuine issue of material fact that features of the accused product were insubstantially different from claim terms). However, on a motion for summary judgment, the expert's testimony must set forth "the factual foundation for his opinion-such as a statement regarding the structure found in the accused product-in sufficient detail for the court to determine whether that factual foundation would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the nonmovant." Arthur A. Collins, Inc. v. N. Telecom Ltd., 216 F.3d 1042, 1047-48 (Fed. Cir. 2000). Similarly, "a party cannot create an issue of fact by supplying an affidavit contradicting his prior deposition testimony, without explaining the contradiction or attempting to resolve the disparity." Sinskey v. Pharmacia Opthalmics, Inc., 982 F.2d 494, 498 (Fed. Cir. 1992).

Here, the Court previously has interpreted the claim language of the '985, '720, and '785 patents. (Claim Construction.) Pulse now moves for summary judgment of non-infringement as to (1) each product represented by the H6502NL, PE-5762QNL, and PE-67540NL parts; (2) each asserted Claim of the '985 Patent, Claim 6 of the '720 Patent, and Claims 2 and 26 of the '785 Patent with respect to the products represented by the H0009 and H0019 parts; and (3) Claim 7 of the '985 Patent, and Claims 18 and 48 of the '785 Patent with respect to all the accused products. Plaintiff Halo moves for partial summary judgment of infringement with respect to (1) Claims 1, 2, 6, 7, 8, and 16 of the '985 Patent; (2) Claims 1 and 6 of the '720 Patent; and (3) Claims 1, 2, 18, 26, 40, and 48 of the '785 Patent.

A. Products Represented by H6502NL, PE-5762QNL, and PE-67540NL

All of the Asserted Halo Claims require either "a plurality of toroid transformers" or "at least one toroid transformer." Pulse argues that the products represented by the H6502NL, PE-5762QNL, and PE-67540NL parts do not infringe any of the Asserted Halo Claims, either literally or under the doctrine of equivalents, because the above products do not contain any toroid transformers. Additionally, Pulse argues that Halo appreciated the differences between toroid transformers and toroid chokes at the time of the patent applications because Halo expressly claimed toroid chokes in the '151 Patent, filed contemporaneously with the Patents at issue here, yet omitted any mention of toroid chokes in the present Patent. Pulse argues, therefore, that the Court should hold that a toroid choke is not the equivalent of a toroid transformer as a matter of law. Halo responds that each of the accused products contains one or more toroid chokes which, under the doctrine of equivalents, are equivalent to toroid transformers and therefore summary judgment in Pulse's favor is inappropriate.

Halo inventor Jeffrey Heaton testified that transformers and common mode chokes cannot be used interchangeably. (Mot. for Summ. J. of Non-Infringement (Doc. #239), Ex. 7 ["7/21/2010 Dep. of Jeff Heaton."] at 30-31.) Another Halo inventor, Peter Lu ("Lu"), testified that while common mode chokes can pass both AC and DC signals, transformers are unable to pass DC signals. (Mot. for Summ. J. of Non-Infringement, Ex. 20 at 168-171.) However,

Lu also testified that while toroid chokes and toroid transformers are not interchangeable if the external and internal connections remain the same, they can be interchangeable if the external and internal connections are altered. (Id.)

Dr. Wilmer Bottoms ("Bottoms") testified that toroid chokes and toroid transformers are physically identical in the context of the Asserted Halo Claims. (1/13/2011 Decl. of Dr. Wilmer Bottoms "[1/13/2011 Bottoms Decl."] (Doc. #259) at ¶ 108.) Additionally, Bottoms states that toroid chokes and toroid transformers are both constructed and situated inside the package in the same manner. (Id. at ¶ 109.) Bottoms states that toroid chokes do not actually become toroid chokes until they are placed in a circuit in a manner that produces the electrical characteristics of a choke, and that a toroid transformer may be used as a toroid choke simply by arranging the circuitry external to the accused product in a different manner. (Id. at ¶ 110.) Pictures of the accused products show no discernable difference between the physical characteristics of toroid chokes and toroid transformers. (Opp'n Non-Infringement at 4.) With respect to the PE-5762QNL product groupings, Bottoms declares that the drawing and electrical schematics show that the product contains a single toroid transformer. (1/13/2011 Bottoms Decl. at ¶ 112.) Bottoms notes that the parts drawing for the PE-5762QNL contains the notation "XFRM," which is an abbreviation for transformer. (Id.)

Here, viewing all evidence in the light most favorable to Halo, the non-moving party, conflicting expert testimony creates a genuine issue of material

fact that a toroid choke reads on the limitation of one or more toroid transformers. While Pulse offered testimony showing that toroid chokes and toroid transformers are not interchangeable, Halo has offered conflicting expert testimony supported by factual assertions that creates a genuine issue of material fact.

Halo offered Bottoms' deposition testimony that, for the purposes of the Asserted Halo Claims, toroid chokes and toroid transformers are physically identical; toroid chokes and toroid transformers are substantially similar in terms of how they are constructed and connected within the package; and that toroid chokes are interchangeable with toroid transformers if the external circuitry is arranged in a different manner. As factual support for his testimony, Bottoms offers his knowledge about the electrical characteristics of toroid chokes and toroid transformers; knowledge about the construction of toroid chokes and toroid transformers; and pictures of the accused products and Halo's products showing that toroid chokes and toroid transformers both consist of wire wrapped toroids and are physically identical. Viewing all evidence in the light most favorable to Halo, a genuine issue of material fact exists as to whether the toroid chokes present in the products represented by H6502NL and PE-67540NL are the equivalent of toroid transformers. Additionally, there is a genuine issue of material fact that PE-5762QNL contains a toroid transformer. Accordingly, summary judgment of non-infringement of the products represented by the H6502NL, PE-5762QNL, and PE-67540NL parts is inappropriate and the Court will deny Defendants' motion in this respect.

B. Products Represented by the H0009 and H0019

All of the Asserted Halo Claims require the toroids to be "by/in a soft silicone material." The Court construed the claim language "by/in a soft silicone material" to mean "retained inside the package by a soft silicone material." (Claim Construction at 18.) "Soft silicone material" means " a soft silicone material that is resilient so as to allow expansion of the toroid when heated." (Id.) This Court has acknowledged that to one of ordinary skill in the art, "soft silicone does not mean hard plastic or epoxy." (Id.) Therefore use of epoxy to retain toroids in their packaging would not satisfy this claim element.

Pulse argues that the products represented by the H0009 and H0019 parts do not infringe any of the Asserted Halo Claims, either literally or under the doctrine of equivalents, because the above products do not use soft silicone to retain their transformers. Pulse states that the H0009 and H0019 parts use hard plastic or epoxy to retain their toroids. Halo states that the toroids present in the products represented by the H0009 and H0019 parts are retained inside the package by a resilient silicone material and hence infringe on the Asserted Halo Claims.

Long-time Pulse engineer Aurelio Gutierrez ("Gutierrez") declares that early on in the assembly process, the toroids of the accused products are dipped into silicone material. (Mot. for Summ. J. of Non-Infringement, Ex. 13 ["Gutierrez Decl."] at ¶ 9.) Gutierrez states that this initial coating is a separate

and distinct procedure from the procedure which retains the toroids in the packaging. (Id.) Gutierrez also declares that the toroids of the H0009 and H0019 products are later retained in their package by the epoxy Dexter-Hysol E01057. (Id. at ¶¶ 10-11.) Product drawings and bill-of-materials information for the H0009 and H0019 products show that Dexter-Hysol E01057 is used in the products. (Mot. for Summ. J. Non-infringement, Exs. 17, 18.)

However, Bottoms declares that the toroids of the H0009 and H0019 products are retained in their packaging by soft silicone that is resilient so as to allow expansion of the toroid when heated. (1/13/2011 Bottoms Decl. at ¶ 113.) To support his position, Bottoms offers drawings and product schematics of the H0009 and H0019 products. (Id.) Bottoms states that the toroids of the H009 and H0019 products are coated with soft silicone which surrounds the toroid on all sides and then placed in the package. (Id.) Bottoms states that after the toroids are placed in package, a small amount of epoxy is placed in the package. (Id. at ¶ 114.) According to Bottoms, the epoxy never comes into direct contact with the toroids and is placed next to the toroids, contacting the silicone coated toroids only if they move laterally within the package. (Id.) It is Bottoms' opinion that "silicone retains the toroids in the H0009 and H0019 products." (Id. at ¶ 113.)

Here, Halo has presented evidence, in the form of Bottoms' declaration, that the toroids in the H0009 and H0019 products are retained by a soft silicone material that is resilient so as to allow expansion of the toroid when heated. Bottoms offers pic-

tures of the H0009 and H0019 showing the toroids coated in silicone material and the placement points for epoxy to support his declaration. Viewing this evidence in the light most favorable to Halo, as the Court must, there is a genuine issue of material fact as to whether the toroids of the H0009 and H0019 products are retained in their packages by a soft silicone material. Accordingly, summary judgment of non-infringement of the products represented by the H0009 and H0019 parts is inappropriate and the Court will deny Defendants' motion in this respect.

C. Claim 7 of the '985 Patent and Claims 18 and 48 of the '785 Patent

Claim 7 of the '985 Patent and Claims 18 and 48 of the '785 Patent (collectively, the "Asserted Standoff Claims") require a portion of the package designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board. Pulse argues that none of the accused products are designed to have a portion of their respective packages rest in contact with the printed circuit board. Halo responds that the accused Pulse products contain a standoff that is designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board for maintaining a distance between the bottom of the pins and the printed circuit board.

Gutierrez declares that "[n]one of the accused Pulse products are designed to have a portion of their respective packages rest in contact with the printed circuit board after mounting." (Gutierrez Decl. at ¶

13.) Additionally, Gutierrez states that terminal pins, rather than a standoff, are used to "prevent the end walls, or any other portion of the package, from resting in contact with the circuit board after mounting." (Id.)

Bottoms declares that the Pulse H0022 product includes a standoff designed to prevent the solder posts from contacting the printed circuit board for maintaining a distance between the bottom of the pins and the printed circuit board. (1/13/2011 Bottoms Decl. at ¶ 117.) Bottoms further declares that the Pulse H0022 standoffs are intended to rest in contact with the printed circuit board and prevent damage to the printed circuit board or the device. (Id.) In Bottoms' expert opinion, all of the representative products include a standoff. (Id.) Bottoms bases his opinion on examination of the Asserted Standoff Claims and the accused Pulse products, as well as schematic drawings of Pulse product H0022 which he contends shows a standoff. Additionally, Dr. Lawrence Larson ("Larson"), an expert retained by Pulse, testified that the standoffs in the '985 patent were designed to rest in contact with the printed circuit board. (Countryman Decl. (Doc. #269), Ex. 24 at 224-25.)

Viewing all evidence in the light most favorable to Halo, as the Court must, conflicting expert testimony creates a genuine issue of material fact that the accused products contain a standoff designed to rest in contact with the printed circuit board after mounting to prevent the solder posts from contacting the printed circuit board. While Pulse offered the declaration of its employee that its products do not

contain a standoff in accordance with the Asserted Standoff Claims, Halo offered Bottoms' declaration that the accused Pulse products contain a standoff. Bottoms' declaration is supported by analysis of the Asserted Standoff Claims and comparison to the accused products, as well as schematic drawings of Pulse product H0022 showing a structure consistent with a standoff. Accordingly, summary judgment of non-infringement of Claim 7 of the '985 Patent or Claims 18 and 48 of the '785 Patent is inappropriate and the Court will deny Defendants' motion in this respect.

D. Infringement of Claims 6 of the '985 Patent

Claim 6 of the '985 Patent requires the following:

An electronic surface mount package for mounting on a printed circuit board in an electronic device, said electronic surface mount package comprising:

- a one piece construction package having a sidewall and an open bottom,
- a plurality of toroid transformers carried within said package by a soft silicone material, said transformers each having wires wrapped thereon,
- a plurality of terminal pins molded within and extending from the bottom of said package, each of said pins extending through a bottom of said side wall and having a notched post upon which said wires from said transformers are wrapped and soldered thereon, respectively.

This Court construed the phrase "an electronic surface mount package for mounting on a printed circuit board in an electronic device" to mean "an electronic device configured to attach to the surface of a DC voltage only printed circuit board." (Claim Construction at 16.) This Court construed "by a soft silicone material" to mean "retained inside the package by a soft silicone material" and "a soft silicone material" to mean "a silicone material that is resilient so as to allow expansion of the toroid when heated." (Id.)

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 read on all the limitations of Claim 6 of the '985 Patent, therefore, summary judgment is appropriate. Pulse responds that there are genuine issues of material fact that the accused H0022, H1260, H1305, H1174, and H0026 products contain all of the claim limitations, hence summary judgment is inappropriate. Additionally, Pulse previously moved for summary judgment of non-infringement with respect to these parts arguing, among other things, that the toroids of the accused Pulse products are not retained in their package by soft silicone. While the evidence presented by Pulse was not sufficient to grant summary judgment, it may be used to create a genuine issue of material fact in opposition to Halo's motion.

Bottoms declares that the accused Pulse products meet the claim limitations of Claim 6 of the '985 Patent. (12/22/2010 Decl. of Wilmer Bottoms ["12/22/2010 Bottoms Decl."] (Doc. #247) at ¶¶ 14-20.) Bottoms bases his opinion on analysis of the accused Pulse products and the Halo Patents as well as

product drawings of the accused Pulse products which appear to show a one piece construction having an open bottom and side wall. (Id.)

Larson declares that each accused Pulse product is designed and configured to attach to a board that passes both AC and DC signals and therefore does not meet the "DC voltage only printed circuit board" claim restriction. (Decl. of Lawrence Larson ["Larson Decl."] (Doc. #266) at ¶ 3.) In connection with Pulse's Motion for Summary Judgment of Non-infringement, Gutierrez declared that he was familiar with the manufacturing process of the accused products, and that early on in the manufacturing process, the toroids were dipped in silicone material and then later were retained in their packages by a separate adhesive.

Viewing all evidence in the light most favorable to Pulse, as the Court must when deciding Halo's motion, there are genuine issues of material fact as to whether the H0022, H1260, H1305, H1174, and H0026 products meet the limitations of Claim 6 of the '985 Patent. Pulse's prior motion provided evidence that, while not sufficient to grant summary judgment to Pulse, creates a genuine issue of material fact as to whether the toroids in the accused Pulse products are retained in their packages by soft silicone. Accordingly, the Court will deny summary judgment on this issue.

E. Infringement of Claim 7 of the '985 Patent

Claim 7 of the '985 Patent requires the claim limitations of Claim 6 in addition to "a standoff for

maintaining a distance between the bottom of said pins and said printed circuit board." The Court construed "standoff" to mean "a portion of the package designed to rest in contact with the printed circuit board after mounting in order to prevent the solder posts from contacting the printed circuit board." (Claim Construction at 20.)

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 read on all limitations of Claim 7 of the '985 Patent. As it did in its motion for summary judgment, Pulse argues that the standoff limitation of Claim 7 of the '985 patent is not present in the above accused products.

Bottoms declares that the accused Pulse products contain a standoff as required by Claim 7 of the '985 Patent. (12/22/2010 Bottoms Decl. at ¶ 28.) Bottoms bases his opinion on analysis of the accused Pulse Products and the claim language of Claim 7. (Id.) Drawings of the accused products appear to show ends walls, which also may serve as a standoff. (Id. at ¶ 26.) Gutierrez declares that none of the above accused pulse products has such a standoff. (Gutierrez Decl. at ¶¶ 13-24.) Gutierrez also states that the representative products include terminal pins that extend from the package side walls and below the package end walls for mounting onto the surface of a printed circuit board, and that these pins, as opposed to a standoff, prevent any portion of the package from resting in contact with the circuit board. (Id.)

Viewing all evidence in the light most favorable to Pulse, as the Court must when deciding Halo's motion, there are genuine issues of material fact as to whether the H0022, H1260, H1305, H1174, and H0026 products meet the limitations of Claim 7 of the '985 Patent. Pulse has offered evidence sufficient to create a genuine issue of material fact as to whether the accused products contain a standoff. Pulse offers the Gutierrez declaration supported by his analysis of the accused products and the Halo Patents for this proposition. Supported conflicting expert testimony is sufficient to create a genuine issue of material fact. Additionally, the side view drawings of the accused products do not conclusively show that the end wall is designed to rest in contact with the printed circuit board. Accordingly, Halo has not met its burden of showing no genuine issue of material fact remains as to the existence of a side wall designed to rest in contact with a printed circuit board. Therefore, summary judgment that Pulse infringes on Claim 7 of the '985 patent is inappropriate. The Court will deny Plaintiff's motion in this respect.

F. Infringement of Claims 1, 2, and 8 of the '985 Patent

Claim 1 of the '985 Patent is materially similar to Claim 6 of the '985 Patent with the exception that the preamble of Claim 1 does not recite the "for mounting on a printed circuit board in an electronic device" language. The limitations of Claim 2 are materially similar to Claims 1 and 6 with the exception that Claim 2 does not require "one piece" construction, and, like Claim 1, does not contain the "for mounting on a printed circuit board in an electronic

device" language in the preamble. Claim 8 of the '985 Patent contains the same limitations as Claims 2 and 6 with the exception that Claim 8 requires only one toroid transformer rather than a plurality of toroid transformers.

Halo relies on its earlier analysis of Claim 6 to allege that the products represented by Pulse products H0022, H1260, H1305, H1174, and H0026 infringe on Claims 1 and 2 of the '985 Patent. Halo also contends that Pulse products represented by 23Z110SMNL contain one toroid transformer and thus infringe on Claim 8 of the '985 Patent. Pulse relies on its earlier Motion for Summary Judgment of Non-infringement to argue that the accused products do not read on all the limitations of Claims 1, 2, and 8 of the '985 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims, 1, 2, and 8 of the '985 Patent require toroids to be retained in their packages by soft silicone. Accordingly, summary judgment in favor of Halo is not appropriate with respect to Claims 1, 2, and 8 of the '985 patent.

G. Infringement of Claim 16 of the '985 Patent

Claim 16 of the '985 Patent Halo requires the following limitations:

An electronic surface mount package comprising: a construction package having a first side wall and an open bottom,

at least one toroid transformer carried within said package by a soft silicone material, said toroid transformer having a wire wrapped thereon,

at least one terminal pin molded within and extending from the bottom of said package, said pin extending through a bottom of said first side wall and having a notched post upon which said wire from said transformer is wrapped and soldered thereon, wherein said post is substantially parallel to said first side wall, and a portion of said terminal pin extends from and is substantially perpendicular to said first side wall, said terminal pin further including a lead for mounting onto the surface of the printed circuit board,

an end wall substantially perpendicular to said first side wall, wherein at least a portion of said end wall extends below said post, and

a second side wall substantially parallel to said first side wall, and wherein said wire from said transformer is contained between first and second planes defined respectively, by an outside surface of said first side wall, and an outside package of said second side wall.

Halo argues that all of the accused products infringe on the limitations that are unique to Claim 16 of the '985 Patent. In its Response, Pulse does not

specifically dispute the limitations that are unique to Claim 16. However, in its Motion for Summary Judgment, discussed above, Pulse argues that the toroids in its products are not retained by soft silicone, which would be required to infringe on Claim 16 of the '985 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims 16 of the '985 Patent requires toroids to be retained in their packages by soft silicone. Accordingly, summary judgment in favor of Halo is not appropriate with respect to Claim 16 of the '985 patent.

G. Claim 1 of the '720 Patent

Claim 1 of the '720 Patent requires the following limitations:

An electronic surface mount package for mounting onto the surface of a printed circuit board in an electronic device, said package comprising:

- a one piece open construction package having a side wall,
- a plurality of toroid transformers within said package, said transformers each having wires wound thereon,
- a plurality of terminal pins molded within the side wall of said package, the ends of the terminal pins forming solder posts and extending through and below the bottom of said side wall,

> said solder posts each having an hour-glass shaped notch upon which said wires from said transformers are wrapped and soldered thereon, respectively,
> the other end of each of the terminal pins extending in gull wing fashion outwardly from the side wall and below the bottom of the package for mounting onto the surface of the printed circuit board.

The Court construed "hour-glass shaped notch" to mean "a notch formed by two mirrored indentations on opposite edges of the solder post." (Claim Construction at 22.) The Court construed "gull wing fashion" to mean "extending outwardly from the case, then extending in a downward fashion away from the case, and then extending outwardly from the case." (Id.)

Halo argues that the H0022, H1260, H1305, H1174, H0026, and H0019 representative products infringe on Claim 1 of the '720 Patent. Halo contends that drawings of the accused products show that the accused products read on all limitations. Pulse responds that the accused products represented by the Pulse H0026 product utilize "J-leads" that do not extend in a gull wing fashion as terminal pins. Additionally, Pulse argues that Halo has not met its burden of showing no genuine issue of material fact remains because it only completes an analysis on the representative product H0022, and Halo merely states that analysis of the other representative parts yields similar results.

Drawings of the accused representative product H0022 appear to show that the product contains gull wing terminal pins. (Countryman Decl. (Doc. #248), Exs. 18, 19.) Drawings also show one piece construction and a plurality of toroid transformers. (Id.) Drawings of the H0022 product also appear to show an hour glass shaped notch. (Id., Ex. 18.) Bottoms declares that the representative products include one or more terminal pins that are molded within and extend through and below the bottom of the side wall. (12/22/2010 Bottoms Decl. at ¶¶ 34-35.) Additionally, Bottoms states that the representative products have terminal pins that extend in a "gull wing" fashion. (Id. at ¶ 36.) Drawings of the H0026 product appear to show terminal pins extending in a "J lead" rather than "gull wing" fashion. (Mot. for Summ. J. of Non-Infringement (Doc. #239), Exs. 23, 24.)

Pulse has presented sufficient evidence to create a genuine issue of material fact as to whether the H0026 product contains terminal pins extending in a "gull wing" fashion. Accordingly summary judgment in favor of Halo on this issue is inappropriate and will be denied. Pulse does not respond specifically to Halo's argument that products other than those represented by the H0026 product infringe on Claim 1 of the '720 Patent. However, Pulse argues that Halo's "cursory" analysis of products other than the H0022 does not meet Halo's burden of showing no genuine issue of material fact as to whether the representative products read on all limitations of Claim 1. The Court agrees Halo has not met its burden with respect to products other than the H0022 and summary judgment will be denied in that respect. With

respect to the H0022 representative product, Halo has provided sufficient evidence showing that the H0022 representative product reads on all limitations of Claim 1 of the '720 Patent. Pulse has not provided sufficient evidence creating a genuine issue of material fact as to whether the H0022 product reads on all limitations of Claim 1 of the '720 Patent. Accordingly, the Court will grant partial summary judgment in favor of Halo with respect to the H0022 product only.

H. Claim 6 of the '720 Patent

Claim 6 of the '720 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:
> an open construction package having a side wall, at least one toroid within said package in a soft silicone material, said transformer having a wire wound thereon,
> at least one terminal pin molded within the side wall of said package,
> said one end forming a solder post extending through and below the bottom of said side wall said solder post having a notched post upon which said wire from said transformer is wrapped and soldered thereon.

Halo argues that drawings and testimony regarding the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products show that these products read on all limitations of Claim 6 of

the '720 Patent. Pulse, as with Claim 1 of the '720 Patent, argues that Halo has not met its burden of showing no genuine issue of material fact remains as to whether the accused products read on all limitations of Claim 6 of the '720 Patent.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claim 6 of the '720 Patent requires "at least one toroid transformer within . . . soft silicone material." Accordingly, there is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products meet this limitation. Accordingly, summary judgment on this issue is inappropriate and will be denied.

I. Claim 1, of the '785 Patent

Claim 1 of the '785 Patent requires the following limitations:

> An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:
> a side wall with a bottom end,
> a plurality of toroid transformers within the package, the toroid transformers each having wires wrapped thereon,
> a plurality of terminal pins molded within the side wall and having a solder post with an end upon which the wires from the transformers are respectively wrapped and sol-

> dered thereon, each of the post ends extending beyond the bottom of the side wall.

Halo argues that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 infringe on Claim 1 of the '785 Patent. Pulse does not respond specifically to arguments that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 infringe on Claim 1 of the '785 Patent, but instead argues that Halo has not met its burden of putting forth a prima facie case of infringement of Claim 1 of the '785 Patent.

Halo has not met its burden of showing no genuine issue of material fact as to whether the accused products read on all limitations of Claim 1 of the '785 Patent. While Bottoms declares that the representative products meet all limitations of Claim 1, he did not set forth the factual basis for his findings. Accordingly, his declaration is not sufficient to show no genuine issue of material fact remains. Therefore, summary judgment on this issue will be denied.

J. Claims 2 and 26 of the '785 Patent

Claims 2 and 26 of the '785 Patent are similar to Claim 1, but both Claims require toroids to be retained in their packages by a soft silicone material. Halo contends that the products represented by Pulse products H0022, H1260, H1305, H1174, H0019, and H0026 have toroids retained in their packages by soft silicone material and hence read on all limitations of Claims 2 and 26 of the '785 Patent.

In its response, Pulse does not respond specifically to the arguments that its products infringe on claims 2 and 26 of the '785 Patent. However, in its motion for summary judgment of non-infringement, Pulse argues that its accused products do not have toroids retained in soft silicone material.

As set forth earlier in this Order with respect to Claim 6 of the '985 Patent, there is a genuine issue of material fact as to whether the toroids of the accused products are retained in their packages by soft silicone material. Claims 2 and 26 of the '785 Patent require toroids retained in their package by a soft silicone material. Accordingly, there is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0026, and 23Z110SMNL representative products meet this limitation. Accordingly, summary judgment on this issue is inappropriate and will be denied.

K. Claims 18 and 48 of the '785 Patent

Claims 18 and 48 of the '785 Patent both require a standoff and a gap between the bottom end of the side wall and the standoff. Halo contends that the H0022, H1260, H1305, H1174, H0019, and H0026 representative products contain a standoff and hence infringe on Claims 18 and 48 of the '785 Patent. Pulse contends that Halo has failed to prove that any of the accused products include a gap between the bottom end of the side wall and the standoff as required by Claims 18 and 48 of the '785 Patent.

Bottoms declares that the representative products contain a gap between the standoff and the bottom end of the sidewall. (12/22/2010 Bottoms Decl. at ¶ 44.) Larson declares that, in all accused Pulse products, the side wall and end wall are continuously touching and there is no gap between them. (Larson Decl. (Doc. #266) at ¶ 6.) From drawings of the H0022 product, it is unclear whether this product contains a standoff and gap. (Countryman Decl. (Doc. #248), Ex. 18.)

There is a genuine issue of material fact as to whether the H0022, H1260, H1305, H1174, H0019, and H0026 representative products contain a standoff and a gap between the standoff and the bottom end of the side wall. From drawings of the representative products it is unclear whether a gap is present, and the parties have presented conflicting expert testimony on the issue. Accordingly, summary judgment on this issue is inappropriate and will be denied.

L. Claim 40 of the '785 Patent

Claim 40 of the '785 Patent requires the following limitations: An electronic surface mount package for mounting onto the surface of a printed circuit board comprising:

a first side wall with a bottom end, a plurality of toroid transformers within the package, the toroid transformers each having wires wrapped thereon,

a plurality of terminal pins molded within the first side wall and having a solder post with an end upon which the wires from the

transformers are respectively wrapped and soldered thereon, each of the post ends extending beyond the bottom end of the first side wall, wherein each of the post ends is substantially parallel to the first side wall, and a portion of each of the terminal pins extends from and is substantially perpendicular to the first side wall, each of the terminal pins further including a lead for mounting onto the surface of the printed circuit board, and

a second side wall substantially parallel to the first side wall, and wherein the wires from the transformers are contained between the first and second planes defined, respectively, by an outside surface of the first side wall and an outside surface of the second side wall.

Halo contends that the H0022, H1260, H1305, H1174, H0019, H0026110SMNL representative products contain all limitations of Claim 40 of the '785 Patent and hence infringe on the '785 Patent. Halo provides an analysis of the drawing of the H0022 product and contends that it contains all the limitations of Claim 40 of the '785 Patent. Halo then asserts that analysis of the other representative products would show that these products read on all the limitations of Claim 40 as well. Pulse does not respond specifically to allegations that the above products read on the limitations of Claim 40 of the '785 Patent but contends that, for all Claims, Halo has not met its burden of showing no genuine issue of material fact as to whether all limitations are met.

Bottoms declares that the accused products contain posts that extend beyond the bottom end of a first side wall; that each of the posts is substantially parallel to the first side wall; that a portion of the terminal pins extends from and is substantially perpendicular to the first side wall; and that each of the terminal pins include a lead for mounting onto the surface of the printed circuit board. (12/22/2010 Bottoms Decl. at ¶ 45.) Drawings of the H0022 product appear to show terminal pins extending through a side wall; posts being substantially parallel to the side wall; and a portion of the terminal pins substantially perpendicular to the side wall. (Countryman Decl. (Doc. #248), Ex. 18.) Drawings of the H1260, 23Z110SMNL, H1305, H1174, H0026, and H0019 also appear to show terminal pins extending through a side wall; posts being substantially parallel to the side wall; and a portion of the terminal pins being substantially perpendicular to the side wall. (Countryman Decl. (Doc. #248), Exs. 25-31.)

Viewing all evidence in the light most favorable to Pulse, there is a genuine issue of material fact as to whether the accused products read on all limitations of Claim 40 of the '785 Patent. While the drawings of the accused representative products and Bottoms' testimony provided evidence that the accused products contain posts that extend beyond the bottom end of the first side wall; that each of the posts is parallel to the first side wall; and that a portion of the terminal pins are substantially perpendicular to the side wall, Halo does not provide any evidence to support Bottoms' contention that the terminal pins contain leads for mounting onto a printed circuit board. It is not clear from drawings of

the accused products that these products contain such leads. Accordingly, there is a genuine issue of material fact as to whether the H1260, 23Z110SMNL, H1305, H1174, H0026, and H0019 representative products read on all limitations of Claim 40 of the '785 Patent. Accordingly, summary judgement on this issue will be denied.

IV. INVALIDITY/VALIDITY (Doc. #250 and #240)

Under 35 U.S.C. § 102(b), a patent is invalid if "the invention was . . . in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Invalidity is an affirmative defense and the burden of proof lies with the party challenging the patent's validity. Electromotive Div. of Gen. Motors Corp. v. Transp. Sys. Div. of Gen. Elec. Co., 417 F.3d 1203, 1212 n.2 (Fed. Cir. 2005).

To prove a patent invalid under the "on-sale" bar of § 102(b), the party claiming invalidity must prove that the invention in question was (1) the subject of a commercial, not experimental, sale, and (2) that the invention was ready for patenting. Allen Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1353 (Fed. Cir. 2002). Factors to be considered when determining the experimental nature of a sale include:

> (1) the necessity for public testing, (2) the amount of control over the experiment retained by the inventor, (3) the nature of the invention, (4) the length of the test

> period, (5) whether payment was made, (6) whether there was a secrecy obligation, (7) whether records of the experiment were kept, (8) who conducted the experiment, . . . (9) the degree of commercial exploitation during testing[,] . . . (10) whether the invention reasonably requires evaluation under actual conditions of use, (11) whether testing was systematically performed, (12) whether the inventor continually monitored the invention during testing, and (13) the nature of contacts made with potential customers.

Id. (citing EZ Dock v. Schafer Sys., Inc., 276 F.3d 1347, 1357 (Fed. Cir. 2001)). Every factor may not be relevant in a particular case, rather the factors are to be balanced. Id. An invention is ready for patenting if (1) it was actually reduced to practice or (2) the inventor prepared sufficiently specific drawings or descriptions "to enable a person skilled in the art to practice the invention." Pfaff v. Wells Elec., Inc., 525 U.S. 55, 67-68 (1998). "To demonstrate reduction to practice, a party must prove that the inventor (1) constructed an embodiment or performed a process that met all the limitations and (2) determined that the invention would work for its intended purpose." In re Omeprazole Patent Lit., 536 F.3d 1361, 1373 (Fed. Cir. 2008) (quotation omitted). Further, "[t]esting is required to demonstrate reduction to practice in some instances because without such testing there cannot be sufficient certainty that the invention will work for its intended purpose." Id. (quotation omitted).

A. August 5, 1994 Sale

Pulse argues that the Halo Patents are invalid under 35 U.S.C. § 102(b) because products embodying the Halo Patents were sold commercially more than a year before the filing of the patent applications. Halo responds that Pulse cannot meet its burden to show that the August 5, 1994 transaction between Halo and PBL is invalidating under § 102(b) because the transaction was purely for experimental purposes and there is no evidence that the invention was ready for patenting more than a year before the first Halo Patent was. Pulse replies that it has put forth a prima facie showing that the August 5, 1994 sale was invalidating and Halo has not put forth sufficient evidence to rebut this showing. Additionally, Pulse contends that the experimental use exception cannot apply to the August 5, 1994 sale because the inventions already had been reduced to practice.

As the party claiming invalidity of the patents, Pulse bears the burden of showing that the invention in question was both (1) the subject of a commercial sale, and (2) that the invention was ready for patenting more than a year prior the date of the patent application. The Halo Patents were filed on August 10, 1995. Therefore, to be potentially invalidating, a commercial sale must have taken place prior to August 10, 1994. Only the August 5, 1994 sale is identified by Pulse to be an invalidating sale.

Even viewing all evidence in the light most favorable to Pulse, there is no genuine issue of material fact that the August 5, 1994 sale was for experimental, rather than commercial, purposes. The first,

third, and tenth factors analyze (1) the necessity for public testing, (3) the nature of the invention, and (10) whether the invention reasonably requires evaluation under actual conditions of use. James Heaton avers that prior surface mount packages would warp and crack at high temperatures and Halo needed to test its prototypes to ensure that they offered a reasonable solution to these prior problems before contracting with customers. (12/22/2010 Heaton Decl. at ¶¶ 2-7.) Pulse does not provide evidence raising a genuine issue of material fact in this regard. Rather, Pulse attacks the credibility of James Heaton without providing any evidentiary basis for doing so. Thus, Pulse has presented no evidence raising a genuine issue of material fact that testing of the prototypes under actual conditions of use was necessary because of the nature of the invention.

The second, eighth, ninth, twelfth, and thirteenth factors are (2) the amount of control over the experiment retained by the inventor, (8) who conducted the experiment, (9) the degree of commercial exploitation during the experiment, (12) whether the inventor continually monitored the invention during the testing, and (13) the nature of the contacts made with potential customers. James Heaton avers that the prototypes were at all times under the control of the inventors at PBL or Halo. (Id. at ¶ 8.) Additionally, Heaton states that the Heatons personally performed and continually monitored all testing on the prototypes. (Id. at ¶ 5.) Halo also provides evidence that its first commercial exploitation of the Halo Patents took place weeks later on September 22, 1994. (Countryman Decl. (Doc. #248), Ex 11, Ex. 8 at 320.) Pulse does not provide any evidence creating a genu-

ine issue of material fact with respect to these factors. Pulse does not dispute that the prototypes were at all times under the control of the named inventors, but rather attacks Heaton's credibility by questioning whether the alleged home testing even took place. Again, Pulse does not provide any evidentiary basis for attacking Heaton's credibility. Further, Pulse does not provide any evidence suggesting that Halo made contact with customers or commercially exploited the Halo Patents during testing. Thus, Pulse has presented no evidence raising a genuine issue of material fact as to whether the inventors at all times maintained control over the prototype, conducted and monitored the experiment, and did not exploit the Patents commercially or make contact with potential customers during the testing.

The fourth, seventh, and eleventh factors are (4) the length of the test period, (7) whether records of the experiment were kept, and (11) whether the testing was systematically performed. Jeff Heaton testified that the oven testing was performed as a quick yes or no test regarding whether the new design could withstand high temperatures. (Countryman Decl. (Doc. #248), Ex. 8 at 303-04.) Halo also contends that due to the quick nature and low complexity of the testing, the tests did not take a long time to perform and the Heatons did not keep detailed notes of the experiments. James Heaton states that while the tests were done quickly, they were carried out in a systematic manner, control testing was performed on prior packages, and that he believes he sent a fax to PBL confirming the test results. (12/22/2010 Heaton Decl. at ¶ 4; Countryman Decl. (Doc. #248), Ex. 8 at 313- 315, Ex. 9 at 503-07.)

Pulse notes that Halo has not provided any "contemporaneous evidence" of the testing that corroborates Heaton's declaration. Pulse points out that Halo has not submitted evidence of testing that one would expect, such as notes and records of the experiment, or the fax Heaton allegedly sent to PBL confirming the test results. Viewing the absence of such evidence in the light most favorable to Pulse, there is a genuine issue of material fact that the length of the experiment, the records of the experiment, and the systematic nature of the experiment are indicative of the August 5, 1994 sale being an experimental sale.

The fifth factor is whether payment was made. The invoice in connection with the August 5, 1994 sale indicates that PBL charged Halo $300 for the parts it delivered. (Countryman Decl. (Doc. #248), Ex. 10.) The fact that Halo made "payment does not per se make a section 102(b) bar." Baker Oil Tools, Inc. v. Geo Cann, Inc., 828 F.2d 1558, 1564 (Fed. Cir. 1987). Indeed, "[i]nventors can request another entity's services in developing products embodying the invention without triggering the on-sale bar." Trading Techs. Int'l, Inc., 595 F.3d at 1362. Thus, that payment was made does not, in itself, trigger the on-sale bar under section 102(b).

The sixth factor is whether there is a secrecy obligation involving the use of the invention. Here, there was no explicit vow of secrecy between PBL and Halo regarding the August 5, 1994 transaction. However, as co-inventors of the product, it is not necessary for a confidentiality agreement to be in place regarding this sale. Other courts have found experimental use even where prototypes were given

to outside mechanics where the inventor had "prior working relationships with those mechanics" without an explicit confidentiality agreement. Lisle Corp. v. AJ Mfg. Co., 398 F.3d 1306, 1315 (Fed. Cir. 2005); see also TP Labs, Inc. v. Prof'l Positions, Inc., 724 F.2d 965, 972 (Fed. Cir. 1984). Given Halo's and PBL's relationship as co-inventors, the lack of a formal confidentiality agreement regarding the August 5, 1994 transaction does not raise a genuine issue of material fact that the sale was commercial, rather than experimental.

Viewing all evidence in the light most favorable to Pulse on Halo's motion, Pulse has not presented sufficient evidence to create a genuine issue of material fact that the August 5, 1994 sale was not for experimental purposes. Halo lacks evidence of the testing records and whether these tests were conducted systematically. Further, Halo does not dispute that it paid PBL for the parts. However, these factors are not enough to create a genuine issue of material fact as to the factors as a whole, especially given the co-inventor relationship between Halo and PBL and the fact that the invention was at all times under the control of the inventors. Accordingly, there is not a genuine issue of material fact that the August 5, 1994 sale was for experimental purposes.

Because the Court finds that Pulse has not presented sufficient evidence to create a genuine issue of material fact that the August 5, 1994 sale was experimental, the Halo Patents are not invalid under 35 U.S.C. § 102(b) as a matter of law. Thus, the Court will grant Halo summary judgment of no invalidity based on the August 5, 1994 sale. Accordingly,

summary judgment to Pulse on the same issue will be denied.

B. Priority Date of the '720 Patent

Halo seeks summary judgment that its asserted claims of the '720 Patent are entitled to the August 10, 1995 filing date of the '985 Patent because the asserted claims are a continuation-in-patent which were disclosed in the prior patents. Pulse responds that the only filing date that the claims of the '720 filing date are entitled to is December 27, 1996, the date which the '720 Patent application actually was filed. Pulse contends that "empirical" evidence shows that the specification of the '985 Patent measures 169 lines and the specification of the '720 Patent measures 288 lines, an increase of over 70 percent. Pulse argues that this increase shows that Halo's argument that the only new matter added to the '720 Patent is the reinforcement beam is inaccurate. Pulse also contends that the Patent Office's conclusion as to the priority date of the '720 Patent at least creates a genuine issue of material fact as to the priority date of the '720 Patent. Pulse further contends that sales of products after the August 10, 1994 cut-off afforded the '985 Patent but before the December 27, 1995 cut-off provided for the '720 Patent invalidate the '720 Patent.

A claim of a continuation-in-patent is entitled to the benefit of an earlier filed patent if the claim is disclosed in the parent patent's application. Waldemar Link v. Osteonics Corp., 32 F.3d 556, 558 (Fed. Cir. 1994). However, if the claims contain matters

that were not disclosed in the parent patent, those claims are not entitled to the earlier filing date. Id.

Here, Bottoms declares that the only "new" material in the '720 Patent not covered in the '985 Patent relates to a reinforcement beam, something that is not claimed in Claims 1 or 6 of the '720 Patent. (12/22/2010 Bottoms Decl. at ¶ 8.) Bottoms further declares that Claims 1 and 6 of the '720 Patent recite features that were described in the '985 Patent. (Id.) Halo also provides an analysis of the limitations of Claims 1 and 6 of the '720 showing where they were disclosed in the '985 Patent. (Compare Countryman Decl. (Doc. #248), Exs. 1, 2.) This analysis shows that all limitations of Claims 1 and 6 of the '720 Patent were disclosed in the '985 Patent.

In the face of a comparison of Claims 1 and 6 of the '720 Patent and the prior claims of the '985 Patent, there is no genuine issue of material fact that Claims 1 and 6 of the '720 Patent were disclosed in the '985 Patent. Accordingly, the Court will grant summary judgment in Halo's favor that sales after August 10, 1994 do not invalidate the '720 Patent.

C. Anticipation

A patent also may be invalid because the invention was anticipated by the prior art at the time the patent application was filed. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1334 (Fed. Cir. 2008). "Invalidity by anticipation requires that the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary

skill in the art could practice the invention without undue experimentation." Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed. Cir. 2000).

Pulse argues that the technology behind the Halo Patents was well known in the industry for many years before Halo filed is patent applications. Pulse contends that Claims 1, 2, and 26 of the '785 Patent are anticipated by the Pulse PE-64309 Product. Pulse provides a chart of Claims 1, 2, and 26 of the '785 Patent that purportedly shows how the PE-64309 Product anticipates these claims. (App. to Mot. for Summ. J. Non-infringement (Doc. #252), Ex. 69.) Pulse argues that there is no genuine issue of material fact that the subject matter covered by the Halo Patents was anticipated and therefore summary judgment in its favor is appropriate. Halo disputes only that the PE-64309 Product satisfies the "molded within" requirement of Claims 1, 2, and 26. Therefore, the Court will limit its analysis to whether the PE-64309 Product contains terminal pins that are molded within the sidewall.

There is conflicting testimony regarding whether the plurality of terminal pins are molded within the package. (Compare Reed Decl. (Doc. #252), Exs. 41 ["Lint Decl."] with Countryman Decl. (Doc. #267) at 276:18.) It is unclear from the drawings and product materials list for the PE-64309 product whether the PE-64309 contains a plurality of terminal pins. (Reed Decl. (Doc. #252), Exs. 53-55.)

Viewing all evidence in the light most favorable to Halo, Pulse has not met its burden of showing

no genuine issue of material fact remains as to whether the PE-64309 Product contains all of the limitations of Claims 1, 2, and 26 of the '785 Patent such that a person of ordinary skill in the art could practice the invention. Accordingly, the Court will deny Pulse summary judgment on the issue of anticipation.

D. Obviousness

Under 35 U.S.C. § 103(a), a patent is invalid if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." Thus, when a "patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." KSR Int'l. Co. v. Teleflex Inc., 550 U.S. 398, 417 (2007) (quotation omitted). Inquiries relevant to obviousness include; "(1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." Green Edge Enter., LLC v. Rubber Mulch Etc., LLC, 620 F.3d 1287, 1298 (Fed. Cir. 2010) (quotation omitted). However, "[t]he genius of invention is often a combination of known elements which in hindsight seems preordained. To prevent hindsight invalidation of patent claims, the law requires some teaching, suggestion or reason to combine cited references." McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351 (Fed.

Cir. 2001) (quotation omitted). Further, "when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." KSR, 550 U.S. at 416.

Pulse contends that the technology behind Halo's Patents has been available for years prior to Halo's application and that Halo merely combined known elements in predictable and conventional ways, as such Halo does not deserve patent protection. Pulse contends that the Asserted Halo Claims are obvious when referencing prior art in the Pulse PE-64309 product and the Akachi reference. Pulse further argues that most of the Asserted Halo Claims are found in both the Pulse PE-64309 and the Akachi reference, and for those that are not, it would have been obvious to a person of ordinary skill at the time of the invention to modify the Pulse PE-64309 and/or the Akachi reference. The main categories of claims which Pulse contends are obvious from prior art are notched/hour-glass shaped posts, standoffs, posts substantially parallel to sidewalls, plurality of toroid transformers, transformers retained inside the package by soft silicone material, and terminal pins extending in a gull wing fashion outwardly from the sidewall.

Halo responds that the PE-64309 part and Akachi reference each are missing multiple limitations present in the Halo Patents. Halo contends that there would be no reason for someone of ordinary skill in the art to combine the PE-64309 and Akachi reference with each other and/or other elements disclosed in the Halo Patents. Further, Halo argues that

the prior art at the time of its patents taught away from the combinations present in its patents and in any event, there are genuine issues of material fact regarding obviousness and summary judgment is inappropriate.

Viewing the evidence in the light most favorable to Halo, there is a genuine issue of material fact as to whether the technology behind the Halo Patents was obvious to one of ordinary skill in the prior art at the time of the invention. Halo has presented sufficient evidence, in the form of the Bottoms declaration, industry papers, and a Pulse white paper, to raise genuine issues of material fact that the prior art was teaching away from several key components of the Halo Patents. (See 1/13/2011 Bottoms Decl. at ¶¶ 30, 80, 81, 86-88, 90, 99; Countryman Decl. (Doc. #267), Exs. 13-15.) Further, Halo provided evidence that Pulse used features such as a standoff in some of its earlier products yet did not use a standoff in the PE-64309 to prevent problems of cracking, which later were solved by the developments of the Halo Patents. (1/13/2011 Bottoms Decl. at ¶ 82.) This evidence creates a genuine issue of material fact that the combination of prior art present in the Halo Patents was not obvious.

Halo also presented sufficient secondary objective indicia of non-obviousness to raise a genuine issue of material fact that the technology covered by the Halo Patents was not obvious. Halo further presented evidence of the commercial success of the covered products, that the invention fulfilled a long-felt need, that other attempts at solving the cracking problem had failed, and that industry competitors

are willing to license the technology from Halo as evidence of non-obviousness. (Countryman Decl. (Doc. #263), Ex. 40 at ¶ 40;1/13/2011 Bottoms Decl. at ¶ 100-01; Countryman Decl. (Doc. #267), Ex. 15.) Further, evidence that some potential customers were concerned about the novelty of the products using the technology covered by the Halo Patents is further evidence of nonobviousness. (Countryman Decl. (Doc. #263), Ex. 36.) Accordingly, the Court will deny Pulse's motion for summary judgment of invalidity based on obviousness.

V. EQUITABLE ESTOPPEL, LACHES, and FAILURE TO MARK (Doc. #249)

A. Equitable Estoppel

"Equitable estoppel is an equitable defense to infringement and may serve as an absolute bar to a patentee's claim of infringement." Scholle Corp. v. Blackhawk Molding Co., Inc., 133 F.3d 1469, 1471 (Fed. Cir. 1998). To support a defense of equitable estoppel in the patent context, a defendant must show:

> (1) the patentee, through misleading conduct, led the alleged infringer to reasonably believe that the patentee did not intend to enforce its patent against the infringer; (2) the alleged infringer relied on that conduct; and (3) due to its reliance, the alleged infringer would be materially prejudiced if the patentee were permitted to proceed with its charge of infringement.

Aspex Eyewear Inc. v. Clariti Eyewear, Inc., 605 F.3d 1305, 1310 (Fed. Cir. 2010). Equitable estoppel may arise where the misleading conduct is essentially inaction on the part of the patentee, "[h]owever, plaintiff's inaction must be combined with other factors respecting the relationship or contacts between the parties to give rise to the necessary inference that the claim against the Defendants is abandoned." A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1042 (Fed. Cir. 1992). A party threatening immediate or vigorous enforcement of its patent rights then delaying its claim for an unreasonably long time may be estopped from pursuing its claim. Meyers v. Asics Corp., 974 F.2d 1304, 1309 (Fed. Cir. 1992).

An alleged infringer ignoring or giving little weight to a patentee's offer to negotiate licenses may be evidence that the alleged infringer did not rely on the patentee's conduct. Id. Prejudice because of reliance may be either economic or evidentiary. Economic prejudice "may be shown by a change of economic position flowing from actions taken or not taken by the patentee." Aspex, 605 F.3d at 1312. However, the alleged infringer must prove that any increased expenditure is related to the actions taken by the patentee, and not merely a business decision. Gasser Chair Co., Inc. v. Infanti Chair Mfg. Corp., 60 F.3d 770, 774 (Fed. Cir. 1995). Evidentiary prejudice arises when key witnesses and/or documentary evidence is lost or witnesses' memories lessen because of the plaintiff's unreasonable delay. Meyers, 974 F.2d at 1308. When "deciding whether to bar the suit on estoppel grounds, the court must consider all evidence relevant to the equities." Aspex, 605 F.3d at 1310.

"[E]quitabble estoppel is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules." Aukerman, 960 F.2d at 1041.

Pulse argues that it was misled by Halo's conduct of sending two letters to Pulse not explicitly accusing Pulse of infringement at times when Pulse contends Halo already believed Pulse was infringing. Pulse states that it relied on Halo's misleading conduct by actively expanding the accused product lines. Further, Pulse contends that it has suffered evidentiary prejudice as a result of Halo's allegedly misleading conduct because one of the named inventors of the Halo Patents died two years ago and another inventor is now physically incapacitated and unable to testify. Pulse further states that the other available inventors are now unable to recall important discussions relating to the case because those discussions occurred so long ago.

Halo responds that its conduct was not misleading in any way. Halo argues that Pulse has not shown it relied on any of Halo's activity or inactivity. Further, Halo contends that Pulse has not shown any material prejudice as a result of Halo's actions or inactions. Halo states that there has been no change in Pulse's economic position over the alleged period of delay. Additionally, Halo contends that Pulse has failed to identify any evidentiary prejudice as a result of Halo's activity or inactivity. Halo states that Pulse had the opportunity to depose the inventors it now complains are unable to testify, but did not do so.

Halo President James Heaton states that Halo was only "aware of the possibility Pulse was infringing" its patents at the time it sent the licensing letters to Pulse. (MSJ Estoppel, Ex. 5 ["7/20/2010 James Heaton Dep."] at 179-181.) Pulse "continued to actively expand its accused product lines" after receipt of the letters, and Pulse's sales of the accused products increased in the years after receiving the letters from Halo's counsel. (Decl. of Victor Aldaco (Doc. #252), Ex. 32 ["Aldaco Decl."] at ¶ 15; MSJ Estoppel, Ex. 28.) However, had Pulse believed that Halo intended to assert an infringement claim, Pulse "could have placed more emphasis on alternatives to the accused products," filed for a declaratory judgment, or taken measures to preserve documents in preparation for the present lawsuit. (Aldaco Decl. at ¶¶ 13-15.) No one at Pulse made a conscious decision that it was permissible to continue selling open header surface mounted transformer products after Pulse received the letters from Halo's counsel. (Countryman Decl. (Doc. #260), Ex. 32 ["Munson Dep."] at 282-83.) Rather, Pulse has contended that it "always has believed in good faith that its activities do not constitute infringement of any valid asserted claims of Halo's patents-in-suit." (Countryman Decl. (Doc. #269), Ex. 4.)

One of the named inventors of the Halo Patents, Mr. Loh, died in 2008, and another inventor, Mr. Lok, is now physically incapacitated and unable to testify. (MSJ Estoppel, Ex. 15 at 45.) Inventor Jeff Heaton testified that he is unable to recall certain things related to the development of the Halo Patents. (Id. at 131-143.)

When viewing evidence in the light most favorable to Halo, Halo has presented sufficient evidence raising a genuine issue of material fact as to whether Halo should be estopped. Turning to the first factor of equitable estoppel, there is a genuine issue of material fact as to whether Halo's conduct was misleading and whether Halo led Pulse reasonably to believe that Halo did not intend to enforce its patents against Pulse. The July and August 2002 letters informed Pulse of the Halo Patents, and the August 2002 letter alerted Pulse only to the possibility that Pulse may be infringing. Halo then waited approximately four years before filing the present infringement action. A reasonable jury could find that the letters do not rise to the level of threatening vigorous enforcement then delaying bringing an action. The letters invite Pulse to enter into licensing negotiations but do not explicitly accuse Pulse of infringement. The letters also imply that Halo had yet to thoroughly investigate whether the Pulse products infringed its patents, and that if an infringement action were to come, it likely would take some time for the investigation to be conducted. Additionally, there is nothing in the relationship or contacts between Pulse and Halo that reasonably would indicate to Pulse that Halo did not intend to pursue its claims.

Additionally, there is a genuine issue of material fact that Pulse relied on Halo's activity and/or inactivity. There is evidence that no one at Pulse made a conscious decision to continue selling the accused products. Lack of a conscious decision to continue selling the accused products is evidence that Pulse did not rely on Halo's actions. Similarly, Halo presented evidence that Pulse always believed it was

not infringing on the Patents, evidence which creates a genuine issue of material fact of whether Pulse relied on Halo's alleged misrepresentation that it would not bring suit. Further, Pulse ignoring Halo's attempts to negotiate license agreements, under Meyers, is evidence that Pulse did not rely on Halo's conduct. All evidence taken together and viewed in the light most favorable to Halo raises genuine issues of material fact as to whether Pulse relied on Halo's conduct.

Additionally, there is a genuine issue of material fact as to whether Pulse would be materially prejudiced if Halo is allowed to continue with its infringement claim. While "could have" placed greater emphasis on alternative products had it not been misled by Halo's conduct, Pulse does not provide evidence that, but for Halo's actions, it would have focused on alternative products. Further, Pulse's sales of the accused products increased after Halo's counsel sent letters to Pulse informing them of the possibility of infringement. A reasonable jury could infer that Pulse would have taken its course of action regardless of any of Halo's conduct. This raises a genuine issue of material fact as to whether Pulse suffered economic prejudice as a result of Halo's conduct.

Likewise, there is a genuine issue of material fact that Pulse suffered evidentiary prejudice as a result of Halo's alleged misleading conduct. The fact that Pulse has not deposed the available Hong Kong inventor creates a genuine issue of material fact as to whether it would have deposed the other two Hong Kong inventors had they been available. Additional-

ly, the two unavailable Hong Kong inventors were available at the commencement of the infringement suit and Pulse did not make arrangements to depose them. Although Pulse contends that it did not take efforts to preserve evidence potentially related to the infringement claims, it does not state what evidence it failed to maintain and how the failure to maintain the evidence is related to Halo's alleged conduct.

Viewing all evidence in the light most favorable to Halo, there are genuine issues of material fact as to whether Halo should be equitably estopped from asserting its patent claims. There is a genuine issue of material fact that Halo's conduct was misleading. There are also genuine issues of material fact that Pulse relied on Halo's allegedly misleading conduct and that it suffered economic or evidentiary prejudice because of its reliance. Accordingly, summary judgment on the issue of equitable estoppel is inappropriate and will be denied.

B. Laches

"The defense of laches is committed to the sound discretion of the district court." Aukerman, 960 F.2d at 1032. To prove laches, a defendant must show that the plaintiff delayed filing suit for an "unreasonable and inexcusable length of time after the plaintiff knew or reasonably should have known of its claim against the defendant; and . . . the delay resulted in material prejudice or injury to the defendant." Wanlass v. Gen. Elec. Co., 148 F.3d 1334, 1337 (Fed. Cir. 1998). "The length of time which may be deemed unreasonable has no fixed boundaries but rather depends on the circumstances." Aukerman,

960 F.2d at 1032. Generally, "[t]he Circuit has pronounced a three or four-year delay unreasonable only when that delay was accompanied by extraneous improper tactics or misleading conduct by the plaintiff." IXYS Corp. v. Advanced Power Tech., Inc., 321 F. Supp. 2d 1156, 1163 (N.D. Cal. 2004) (citing MCV, Inc. v. King-Seeley Thermos Co., 879 F.2d 1568, 1572 (Fed. Cir. 1989); Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1550 (Fed. Cir. 1984)). For example, the plaintiff co-inventor telling the patentee that he had no interest in possessing rights in the patent, then later bringing suit to be named on the patent was misleading conduct. MCV, 879 F.2d at 1572. A delay of more than six years raises a presumption that the delay is unreasonable. Wanlass, 148 F.3d at 1337. Material prejudice may be established by showing economic or evidentiary prejudice. Id.

Pulse argues that Halo brought suit after delaying an unreasonable and inexcusable amount of time. As discussed above, Pulse argues it has suffered evidentiary and economic prejudices as a result of Halo's alleged delay in bringing suit. Halo responds that the alleged delay was four years and Pulse is not entitled to the presumption of laches. Halo also states that the alleged delay was both reasonable and excusable. Additionally, Halo contends that Pulse has not shown evidentiary or economic prejudice.

James Heaton testified that he believed Pulse to be infringing on the Halo Patents at the time the letters were sent. (7/20/2010 James Heaton Dep. at 179-180.) Halo brought suit in March 2007, over four

years after Halo allegedly became aware of the alleged infringing activity. James Heaton testified that Halo was facing extreme financial pressures from 2002-2007 and could not afford to pursue a lawsuit. (Id. at 181.) Heaton also states that at this time his wife was terminally ill and he was focused on caring for her. (Id. at 182.)

Viewing all evidence in the light most favorable to Halo, Halo has presented sufficient evidence creating a genuine issue of material fact regarding laches. As an initial matter, Pulse is not entitled to the presumption of laches because the delay was approximately four years. Additionally, Pulse has not shown that the four year delay was accompanied by misleading conduct on Halo's part. The letters Halo sent do not rise to the level of misleading conduct. The letters informed Pulse of the possibility of infringement. Additionally, there are genuine issues of material fact as to whether Pulse was prejudiced by the delay. A reasonable jury could find that because Pulse has not taken steps to depose the remaining available Hong Kong inventor, and did not depose the unavailable inventors in the roughly two years that they were available, that Pulse would not have deposed the unavailable inventors. This raises a genuine issue of material of fact regarding Pulse suffering evidentiary prejudice. Further, as discussed above, there are genuine issues of fact as to whether Pulse would have taken the same actions regarding its product focus and hence whether Pulse suffered economic damages. Accordingly, summary judgment on laches is inappropriate and will be denied.

C. Failure to Mark

Title 35 U.S.C. § 287 limits damages a patentee is able to recover to those damages associated with products marked by the patent number on the product, or those damages occurring after an alleged infringer is on notice of the patented product. Compliance with the marking portion of 35 U.S.C. § 287 is achieved when the "patentee consistently mark[s] substantially all of the patented product." Nike, Inc. v. Wal-Mart Stores, Inc., 138 F.3d 1437, 1446 (Fed. Cir. 1998). Marking ninety-five percent of relevant products has been deemed sufficient to comply with the marking statute. Maxwell v. J. Baker, Inc., 86 F.3d 1098, 1112 (Fed. Cir. 1996); see also Funai Elec. Co., Ltd. v. Daewoo Elecs. Corp., 616 F.3d 1357, 1374 (Fed. Cir. 2010). Where an item is too small to affix a patent number to the product itself, a patentee may affix a label to the package which carries the product. Sessions v. Romadka, 145 U.S. 29, 50 (1882).

Pulse argues that none of the products Halo sells physically are marked with any of the Halo Patent numbers. Halo responds that it marks its products' packaging and that Pulse has not provided any evidence that indicates that Halo consistently failed to mark substantially all of its products. Jeff Heaton declares that Halo's products are too small to physically mark the products themselves, and instead marks the packaging with the associated patent numbers. (Pl's. Resp. to MSJ Estoppel (Doc. #258), Ex. 1 ["1/13/2011 Jeff Heaton Decl."] at ¶ 3; 7/20/2010 James Heaton Dep. at 172-73.) Halo employs several different ways of packaging its products including tape-and-reel, shipping tubes, and trays. (MSJ Estoppel, Ex. 14.) Halo marks the patents on the packaging, including all reels, vacuum sealed

bags containing reels, all boxes in which the bagged reels are placed, all shipping cartons in which reels are placed, all bags in which shipping tubes are placed, all shipping cartons in which trays are placed, and on the data sheets for all products with the exception of Thin Net Transceiver ("TNT") modules. (1/13/2011 Jeff Heaton Decl. at ¶ 4; 7/21/2010 Jeff Heaton Dep. at 225-29; MSJ Estoppel, Ex. 9 ["11/19/2010 Jeff Heaton Dep."] at 344-386, 658-660.) Further, several photos of Halo packaging material show the packages marked with the associated patent numbers. (Countryman Decl. (Doc. #269), Exs. 20, 22, 23.)

Halo sells TNT modules but does not mark them. (11/19/2010 Jeff Heaton Dep.) The patent marking convention referred to in the email does not apply to modules, including the TNT modules. (MSJ Estoppel, Ex. 11.) Halo does not mark patent numbers on the packaging of TNT modules because the patented parts of the TNT modules are not visible without looking inside the module. (1/13/2011 Jeff Heaton Decl. at ¶ 3.) The amount of TNT modules sold by Halo represent approximately one percent of Halo products sold. (Id. at 7.)

The evidence presented by Halo raises a genuine issue of material fact as to whether Halo consistently marked substantially all of its products. A reasonable jury could find that Jeff Heaton's declaration shows that Halo's products are to small to be marked themselves, and therefore that marking the products' packaging complies with § 287. Additionally, the declarations and testimony of Jeff and James Heaton creates a genuine issue of material fact as to whether

Halo marks the packaging of substantially all of its products. Halo provides sufficient evidence to raise a genuine issue of material fact that the TNT modules, which it does not mark, constitute only one percent of the total number of products sold. A reasonable jury could conclude that Halo marks the roughly ninety-nine percent of remaining products, which would satisfy the requirements of marking substantially all of its products. Accordingly, there is a genuine issue of material fact that Halo marked substantially all of its products in compliance with 35 U.S.C. § 287. The Court will deny Pulse summary judgment on this issue.

VI. SALES OUTSIDE OF NORTH AMERICA (Doc. #251)

United States patent law offers protection "only domestically and does not extend to foreign activities." Microsoft Corp. v. AT & T Corp., 550 U.S. 437, 455 (2007) (quotation omitted). Title 35 U.S.C. § 271(a) makes it an act of infringement to make, use, import, offer to sell, or sell any patented invention within the United States without the authority of the patent holder. "It is well established that the reach of section 271(a) is limited to infringing activities that occur within the United States." MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon, 420 F.3d 1369, 1375 (Fed. Cir. 2005). "Mere knowledge that a product sold overseas will ultimately be imported into the United States is insufficient to establish liability under section 271(a)." Id. at 1377. Further, "the location of the contemplated sale controls whether there is an offer to sell within the United States." Transocean Offshore Drilling,

Inc. v. Maersk Contractors USA, Inc., 617 F.3d 1296, 1309 (Fed. Cir. 2010).

Under 35 U.S.C. § 271(b) one who "actively induces infringement of a patent shall be liable as an infringer." "[T]o succeed on a claim of inducement, the patentee must show, first that there has been direct infringement, [and] second, that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement." Minn. Mining & Mfg. Co. v. Chemgue, Inc., 303 F.3d 1294, 1304-05 (Fed. Cir. 2002).

Induced infringement "requires knowledge that the induced acts constitute patent infringement." Global-Tech Appliances, Inc. v. SEB S.A., 131 S. Ct. 2060, 2068 (2011). The knowledge element can be satisfied if it is shown that the defendant was "willfully blind" to the existence of a patent. Id. at 2071. "While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice." MEMC, 420 F.3d at 1378 (quotation omitted). A manufacturer providing e-mail communications and other technical support to third parties in the United States, even though the manufacturer sold the product to a different party abroad, creates a genuine issue of material fact that the manufacturer intended to induce infringement. MEMC, 420 F.3d at 1379-80. Moreover, failure of a manufacturer to obtain an opinion of counsel that a manufacturer's activities are not inducing infringement may be probative of a manufacturer's intent to induce infringement. Broadman Corp. v. Qualcomm Inc., 543 F.3d 683, 699 (Fed. Cir. 2008).

A. Direct Infringement

Pulse argues that Halo has failed to show that it is liable for direct infringement on the majority of its sales of accused products. Pulse states that the majority of the accused products were manufactured, ordered, invoiced, and shipped outside of North America. Pulse argues it should not be liable for infringement based on sales outside of North America. Further, Pulse argues that it has sold relatively few accused products to Cisco and that while it does engage in periodic pricing discussions with Cisco in the United States, these talks were merely forecasts and were not guarantees that Pulse would receive these orders from Cisco contract manufacturers.

Halo argues that Pulse's discussions with Cisco regarding pricing of the accused products took place in the United States and that these discussions constitute offers for the purposes of § 271(a). Further, Halo argues that the prices paid by Cisco contract manufacturers are almost exclusively the same as those negotiated by Cisco, indicating that sales to contract manufacturers were dependent on the offers to sell Pulse made to Cisco in the United States. Accordingly, Halo argues that Pulse directly infringes on the Halo Patents when it sells to Cisco contract manufacturers, even if delivery of such products occurs abroad. Halo also argues that even though accused products sold to manufacturers other than Cisco are delivered abroad, the negotiations regarding these sales often take place in the United States and hence the sales themselves take place in the United States.

Of the $250.6 million in accused products sold by Pulse since March 15, 2001, $210.8 million was shipped outside of North America. (App. to Defs.' Mot. for Summ. J. No Liability (Doc. #253), Exs. 1, 2.) Since at least March 15, 2001, all of the accused products have been manufactured in China. (Id., Ex. 5 ["8/20/2009 Carpenter Dep."] at 137; Decl. of John Carpenter (Doc. #253) ["Carpenter Decl."] at ¶ 6.) Further, since at least March 15, 2001, all purchase orders for accused products that were shipped outside of North America were received at Pulse's sales offices outside of North America. (Id. ¶¶ 6-7.) All accused products eventually shipped to Pulse's customers outside of North America were at no point, in transit or otherwise, in the United States. (Id. at ¶ 8.)

Pulse has sold relatively few accused products to Cisco and its subsidiaries. (App. MSJ No Liability (Doc. #253), Ex. 7 at 94-95, 127-28.) Cisco negotiates the prices that its contract manufacturers pay to Pulse for the accused products. (Id. at 45-47, 53-54, 120-122.) For each Cisco contract manufacturer (Hon-Hai/Foxconn, Flextronics, Celestica, and Jabil), the manufacture, invoicing, shipping, and delivery took place outside of the United States. (Carpenter Decl. at ¶¶ 19-22.)

Pricing discussions with Cisco take place from the Pulse sales office in San Diego, California. (Countryman Decl. (Doc. #260), Ex. 3 ["Vasquez Dep."] at 37, 50.) Pulse engineers have worked with Cisco engineers in the early stages of Cisco's design in Cisco's locations in Austin, Texas and San Jose, California. (Id. at 169-70.) Additionally, Pulse pro-

vides technical support for the accused products to Cisco, among other customers, in the United States. (Countryman Decl. (Doc. #260), Ex. 1 ["Carpenter Dep."] at 314-321; Ex. 12 ["Benjamin Dep."] at 65-71.) A Pulse employee attended regular sales meetings at Cisco offices as a Pulse representative discussing product pricing, among other topics. (Vasquez Dep. at 82-83.) Further, another Pulse employee testified that he has attended various meetings with Cisco executives in the United States and that if there is a problem with parts Cisco obtained from Pulse, Pulse provides technical support in the United States to attempt to rectify the problem. (Benjamin Dep. at 65-66, 71-72.)

Pulse has provided evidence that of the $250.6 million in accused products sold by Pulse since March 15, 2001, the entirety was manufactured outside of North America, and $210.8 million was shipped outside of North America. Halo does not provide any evidence disputing that the products were manufactured overseas or the amount of products shipped outside of North America. Rather, Halo argues that because some pricing discussions took place in the United States, Pulse "offered to sell" the accused products in the United States. It is well settled that liability under § 271(a) requires infringing activity within the United States. MEMC, 420 F.3d at 1375. Further, under Transocean, it is not the location of the offer to sell, but rather the location of the contemplated sale that determines whether an offer to sell is made in the United States. Although Halo has provided evidence indicating that pricing discussions took place between Pulse and its customers in the United States, Pulse has provided evidence

that the majority of its accused products were manufactured and shipped outside of the United States. Halo does not provide sufficient evidence that Pulse shipped these products into the United States. Accordingly, there is not a genuine issue of material fact that for these products, Pulse did not directly infringe the Halo patents. Therefore, Pulse is not liable for direct infringement based on its sales of accused products outside of the United States.

B. Indirect Infringement

Pulse argues that Halo has failed to present evidence that Pulse is liable for indirect infringement under § 271(b). Pulse argues that Halo has not presented any evidence which a reasonable jury could find that any of Pulse's customers directly infringed on the Halo Patents. Further, Pulse contends that it has no knowledge of where the end products incorporating accused Pulse products end up, thus, even if Halo were able to show direct infringement by some of Pulse's customers, Halo cannot show that Pulse had knowledge or intended to induce the alleged infringement.

Halo responds that there is, at a minimum, a genuine issue of material fact that Pulse's sales and offers to customers where delivery occurred abroad indirectly infringe on the Halo Patents. Halo argues that Pulse knowingly induces others to ship accused products back into the United States, making Pulse guilty of indirect infringement. Halo states that there is ample evidence that some of the accused Pulse products that are shipped outside of the United States are eventually sold, offered for sale, used,

and imported into the United States whether as stand alone products or incorporated into end products that are sold in the United States.

Pulse customers do not provide Pulse with information about where the end products incorporating accused Pulse products ultimately end up. (Carpenter Decl. at ¶ 10.) The accused Pulse products are components of computers, servers, internet routers, switches, and hubs. (Carpenter Dep. at 345-348.) Twenty-four to thirty-six percent of computers sold worldwide during the relevant time period were sold in the United States. (Countryman Decl. (Doc. #260), Ex. 39.) Pulse is aware that its customers incorporate Pulse products into products delivered to manufacturers such as Lucent, Apple, Avaya, Canon, Cisco, Dell, HP, IBM, Intel, Motorola, NEC, and Nortel for use in end products. (Carpenter Dep. at 47-48, 75-76, 83, 91, 97, 241-243, 287-88.) The annual sales reports from these manufacturers show that the yearly percentage of end products sold in the United States during the relevant period ranged from 7.1-66.0 percent. (Countryman Decl. (Doc. #267), Exs. 26-36.) A Pulse employee also testified that he believed at least some Cisco end products incorporating the accused products come back to the United States. (Carpenter Dep. at 351-54.) Pulse did not make efforts to obtain a legal opinion that its products did not infringe on the Halo Patents. (Munson Dep. at 282-83.)

Pulse has visited at least fifty U.S.-based entities to promote its accused products. (Carpenter Dep. at 315-16.) Pulse employees gave on-site technical presentations to customers in the United States to

promote use of the accused products. (Id. at 318-21.) Further, Pulse provides customer service support to customers in the United States. (Id. at 337-43.)

Indirect infringement under § 271(b) requires only an act of infringement by a third party and knowing inducement and intent to encourage infringement. Halo has presented evidence that a substantial number of the types of end-products into which Pulse's customers incorporate accused Pulse products eventually are sold in the United States. While Halo does not provide direct evidence about whether, and the number of, accused Pulse products that end up in the United States, Pulse's corporate representative testified that he believed at least some of the accused products end up in the United States. This type of circumstantial evidence has been held to be substantial evidence of indirect infringement. Lucas Aerospace, Ltd. v. Unison Indus., L.P., 899 F. Supp. 1268, 1286-87 (D. Del. 1995) (evidence that the defendants supplied fifty percent of a third party's requirements for particular engine component coupled with evidence that substantial percentage of third party's engines made their way to the United States was sufficient to create a genuine issue of material fact regarding indirect infringement). Accordingly, based on the evidence provided by Halo, a reasonable jury could conclude that Pulse's customers infringe on Halo's patents by bringing accused products into the United States.

To survive summary judgment of no liability for indirect infringement, Halo also must also show there is a genuine issue of material fact as to whether Pulse knowingly induced infringement and pos-

sessed specific intent to encourage infringement. Here, Halo provides evidence that Pulse did not obtain an opinion of counsel that its actions did not induce infringement, even after being alerted to the potentiality of infringement by letters from Halo's counsel. Evidence of this type has been found sufficient to support a jury finding inducement of infringement. Broadman, 543 F.3d at 699. Further, Halo presented evidence that Pulse actively promotes its accused products to end users in the United States who purchase products incorporating the accused products from Pulse's customers. Halo offers evidence that Pulse employees conduct site visits and give technical presentations to end users in the United States. Further, Halo provides evidence that Pulse offers customer support to, and makes accommodations to the manufacturing process for, end users in the United States. Evidence of this nature has been deemed sufficient to permit a reasonable jury to find inducement of infringement. MEMC, 420 F.3d at 1379. Additionally, Pulse's corporate witness testified to his belief that end products containing the accused Pulse products are offered for sale in the United States. A reasonable jury could conclude that the support and other actions taken by Pulse with respect to end users in the United States are intended to induce infringement. Accordingly, Halo has presented sufficient evidence creating a genuine issue of material fact that Pulse indirectly infringed on Halo's patents under § 271(b). The Court, therefore, will deny summary judgment on this matter.

VII. MOTION TO STRIKE PULSE'S NEW SUMMARY JUDGMENT IN REPLY AND TO AMEND THE PARTIES'

SEPTEMBER 2010 STIPULATION
(Doc. #279)

In its Reply in connection with its Motion for Summary Judgment of Invalidity, Pulse raises the argument that Halo's allegations that the PE-64309 part, which was on sale before the Halo Patents were filed, infringes on the Halo Patents, demonstrates that the Halo Patents are invalid as a matter of law. Halo filed the present motion to strike alleging that the PE-64309 was included on the Stipulated Representative Products List in error, and further, that Pulse should not be allowed to raise an argument for the first time in reply. Halo requests that the Court strike this argument from Pulse's Reply and amend the Parties' Stipulation to remove the PE-64309 part from the list of accused Pulse products. Pulse argues that it always has alleged that the PE-64309 invalidates the Halo Patents and that Halo should not be able to reap the benefits, but not suffer the detriments of, the efficiencies created by the Stipulated Representative Products List.

The Court finds that it is in the interests of justice to strike Pulse's argument and to remove the PE-64309 part from the accused product list. A party may not raise an argument for the first time in a reply brief. Graves v. Arpaio, 623 F.3d 1043, 1048 (9th Cir. 2010). Further, given the thousands of products on the Stipulated Representative Product List, the potential for inadvertent errors is great. Additionally, the Court's ruling does not unfairly prejudice Pulse because Pulse still will be able to argue that the PE-64309 reads on all of the Asserted Halo Claims and thus the Halo Patents are invalid. How-

ever, Pulse will not be able to rely on Halo's erroneous inclusion of the PE-64309 part on the accused products list to satisfy its burden as a matter of law.

VIII. CONCLUSION

IT IS THEREFORE ORDERED that Defendants' Motion for Summary Judgment of No Infringement (Doc. #239) is hereby DENIED.

IT IS FURTHER ORDERED that Plaintiff's Motion for Summary Judgment of Infringement (Doc. #245) is hereby GRANTED in part and DENIED in part. Plaintiff's Motion is GRANTED with respect to products represented by the H0022 product with respect to Claim 1 of the '720 Patent only. Plaintiff's Motion is denied in all other respects.

IT IS FURTHER ORDERED that Plaintiff's Motion for Summary Judgment of No Invalidity (Doc. #240) is hereby GRANTED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of Invalidity (Doc. #250) is hereby DENIED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of Equitable Estoppel, Laches, and Failure to Mark (Doc. #249) is hereby DENIED.

IT IS FURTHER ORDERED that Defendants' Motion for Summary Judgment of No Liability for Sales Activity Outside of North America (Doc. #251) is hereby GRANTED in part and DENIED in part.

Defendants' Motion is granted with respect to direct infringement for products sold outside of North America and denied in all other respects.

IT IS FURTHER ORDERED that Plaintiff's Motion to Strike and to Amend the Parties' Stipulation (Doc. #279) is hereby GRANTED. The parties' Stipulated Representative Products List (Doc. #217) is hereby amended to remove the PE-64309 product.

DATED: September 6, 2011

PHILIP M. PRO
United States District
Judge

APPENDIX D

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HALO ELECTRONICS, INC.
Plaintiff-Appellant,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,
Defendants-Appellees,

2013-1472, 2013-1656

Appeal from the United States District Court for the District of Nevada in No. 07-CV-0331, Judge Philip M. Pro.

ON PETITIONS FOR PANEL REHEARING AND REHEARING EN BANC

CRAIG E. COUNTRYMAN, Fish & Richardson P.C., San Diego, CA, filed a petition for rehearing en banc for plaintiff-appellant. With him on the petition were MICHAEL J. KANE and WILLIAM R. WOODFORD, Minneapolis, MN.

MARK L. HOGGE, Dentons US LLP, Washington, DC, filed a combined petition for panel rehearing and rehearing en banc for defendants-cross appellants. With him on the petition were SHAILENDRA K. MAHESHWARI, CHARLES R. BRUTON, and RAJESH C. NORONHA.

JOHN D. HAYNES, Alston & Bird LLP, Atlanta, GA, for amici curiae Nokia Corporation and Nokia USA Inc. With him on the brief was PATRICK J. FLINN.

ANDREW S. BALUCH, Foley & Lardner LLP, Washington, DC, for amicus curiae Louis J. Foreman. With him on the brief was BRENDYN M. REINECKE, Madison, WI.

Before PROST, Chief Judge, NEWMAN, LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN, and HUGHES Circuit Judges.

TARANTO, Circuit Judge, with whom REYNA, Circuit Judge, joins, concurs in the denial of the petition for rehearing en banc.

O'MALLEY, Circuit Judge, with whom HUGHES, Circuit Judge, joins, dissents from the denial of the petition for rehearing en banc.

PER CURIAM.

ORDER

A petition for rehearing en banc was filed by appellant Halo Electronics, Inc., and a response

thereto was invited by the court and filed by cross-appellants Pulse Electronics, Inc. and Pulse Electronics Corporation. A combined petition for panel rehearing and rehearing en banc was filed by cross-appellants Pulse Electronics, Inc. and Pulse Electronics Corporation. The petitions for rehearing and response were referred to the panel that heard the appeal, and thereafter, to the circuit judges who are authorized to request a poll of whether to rehear the appeal en banc. A poll was requested, taken, and failed.

Upon consideration thereof,

IT IS ORDERED THAT:

(1) The petition for panel hearing is denied.

(2) The petitions for rehearing en banc are denied.

(3) The mandate of the court will issue on March 30, 2015.

FOR THE COURT

March 23, 2015
Date

/s/ Daniel E. O'Toole
Daniel E. O'Toole
Clerk of Court

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HALO ELECTRONICS, INC.
Plaintiff-Appellant,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,
Defendants-Appellees,

2013-1472, 2013-1656

Appeal from the United States District Court for the District of Nevada in No. 07-CV-0331, Judge Philip M. Pro.

TARANTO, *Circuit Judge*, with whom REYNA, Circuit Judge, joins, concurring in the denial of rehearing en banc.

I agree that we should deny the petition for en banc review in this case. Halo raises only one question about the enhanced-damages provision of the Patent Act, 35 U.S.C. § 284, and I do not think that further review of that question is warranted. But it seems to me worth briefly noting the range of distinct, but related, questions that others have raised about § 284, if only to clarify what is not at issue

here. Whether such questions warrant en banc review will have to be determined in other cases.

Section 284 is close to content free in what it expressly says about enhanced damages: if damages have been found by a jury or assessed by the court, "the court may increase the damages up to three times the amount found or assessed." During the extended process leading to the enactment of the America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011), Congress was aware of our en banc decision in *In re Seagate*, 497 F.3d 1360 (Fed. Cir. 2007), and considered writing into the text standards that bear strong similarities to those articulated in Seagate. See, e.g., S. 23, 112th Cong. (Jan. 25, 2011); S. Rep. No. 111-18, at 10–13 (2009); S. 515, 111th Cong. (Apr. 2, 2009); 155 Cong. Rec. 6,278–79 (2009); S. Rep. No. 110-259, at 14–16 & n.66 (2008) (discussing Seagate). But Congress chose neither to follow that course nor to repudiate *Seagate*; it chose not to amend § 284 at all. See 157 Cong. Rec. 3,418–20 (2011) (removing proposed changes to § 284). Congress did add 35 U.S.C. § 298 to the statute to prescribe an evidentiary rule about proving that an infringer has "willfully infringed," which is a standard that is not expressly recited in § 284 (or anywhere else in the Patent Act) but that has long been held to be central to—indeed, a necessary condition for—the enhancement of damages. Section 284, however, continues to lack language prescribing substantive or procedural standards for the enhancement of damages.

Questions are now being raised about reconsidering virtually every aspect of enhancement, including whether to overrule or modify standards articulated by the en banc court in *Seagate*. To begin

with, there are fundamental questions about the substantive standards. One is whether willfulness should remain a necessary condition for enhancement under § 284's "may" language: Should that " 'well-settled' " requirement, *Beatrice Foods Co. v. New England Printing & Lithographing Co.*, 923 F.2d 1576, 1578 (Fed. Cir. 1991) (internal citation omitted); see *Seagate*, 497 F.3d at 1368, now be relaxed to allow enhancement of damages even where the infringement is not willful?[1]

Separately, if willfulness is to remain necessary, or even if not, what are the proper standards for finding willfulness? *Seagate's* two-part formulation has one component requiring an objective determination of risk ("an objectively high likelihood that [the accused infringer's] actions constituted infringement of a valid patent") and a second component that can be satisfied by either a subjective or objective determination ("either known or so obvious it should have been known"). *Seagate*, 497 F.3d at 1371. That formulation is based on the Supreme Court's explication of "willfulness" in *Safeco Insur-*

---

[1] Discretion conferred by "may" language "is rarely without limits," including necessary conditions for the action authorized—with the content of such conditions determined by the particular statutory context. Indep. Fed'n of Flight Attendants v. Zipes, 491 U.S. 754, 758 (1989); see *Martin v. Franklin Capital Corp.*, 546 U.S. 132, 139 (2005). Reflecting § 284's "may" language, our precedents hold that willfulness is necessary for, but does not compel, enhancement. When infringement is willful, the district court may or may not award an enhancement, exercising discretion based on various considerations. *See Seagate*, 497 F.3d at 1368; *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992) ("An award of enhanced damages for infringement, as well as the extent of the enhancement, is committed to the discretion of the trial court.").

ance Co of America v. Burr, 551 U.S. 47 (2007). *See id.* at 57 (willfulness in civil-liability context covers both knowing and reckless violations; relying on treatise's observation that "willful," "wanton," and "reckless" " 'have been treated as meaning the same thing, or at least as coming out at the same legal exit' "); *id.* at 69–70 ("recklessness" refers to "conduct violating an objective standard: action entailing 'an unjustifiably high risk of harm that is either known or so obvious that it should be known' ") (quoting *Farmer v. Brennan*, 511 U.S. 825, 836 (1994)); id. at 70 (no unjustifiably high risk where position "was not objectively unreasonable"); *id.* at 70 n.20 (rejecting contention "that evidence of subjective bad faith can support a willfulness finding even when the [defendant's] reading of the statute is objectively reasonable"). Should the standard remain the *Seagate* standard? Or should it be something new?

Other questions arise in applying § 284, even taking as a given the necessity of a willfulness determination, such as who makes which decisions and what standards of proof and review should govern those decisions. Should a judge or jury decide willfulness, in full or in part? Should willfulness (or, rather, its factual predicates) have to be proved by clear and convincing evidence, *see Seagate*, 497 F.3d at 1371, or by a preponderance of the evidence, *cf. Fishman Transducers, Inc. v. Paul*, 684 F.3d 187, 193 (1st Cir. 2012) (adopting preponderance standard for willful violations of the Lanham Act under that statute's provision for enhanced damages)?

Finally, there is the question of appellate review, which is not addressed in our en banc *Seagate* decision. Most significantly, for determinations as to willfulness in particular, what standards govern ap-

pellate review? Is there a legal component reviewable de novo and a factual component reviewable deferentially (for clear error if by the judge, for substantial evidence if by the jury)? *See Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1006–08 (Fed. Cir. 2012). Does the answer change if an "abuse of discretion" standard governs our review? *See Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1748 n.2 (2014) (" 'A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence.' ") (quoting *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 405 (1990)). And what is the effect on review of willfulness determinations under § 284 of the Supreme Court's recent holding in Highmark that attorney's-fees decisions under § 285's "exceptional case" standard are reviewed for an abuse of discretion?

In the present case, Halo raises no questions about the necessity of a willfulness finding for enhancement under § 284, about the decision-maker or burden of persuasion in the trial court, or about the standard of review in the appellate court. Notably, adoption of a more deferential standard of review, without any change in substantive or other standards, could not help Halo: The district court in this case rejected willfulness. *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, No. 2:07-CV-00331, 2013 WL 2319145, at *14–16 (D. Nev. May 28, 2013).

The only enhancement-related question that Halo presents for en banc review is whether the objective reasonableness of Pulse's invalidity position must be judged only on the basis of Pulse's beliefs before the infringement took place. But in my view, Ha-

lo has not demonstrated the general importance of that question or that the panel's assessment of objective reasonableness is inconsistent with any applicable precedents or produces confusion calling for en banc review. *See* Fed. R. App. P. 35(a). Indeed, the panel's approach to objective reasonableness—as negating the objectively high risk of harm (here, infringement) needed for willfulness—is strongly supported by *Seagate* and by the Supreme Court's authoritative *Safeco* decision addressing the meaning of "willfulness" in non-criminal contexts. And that conclusion is not affected by *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), which does not address the term "willful" at all.

Those are sufficient reasons to deny further review here. Doubtless we will receive various requests for en banc review of some or all of the many possible § 284 questions in other cases. The standard for granting en banc review is necessarily a demanding one. We must apply the standard to particular issues in particular cases. Unlike Congress, we may not convene to clean the slate and write a set of rules that answer the host of questions about which § 284 is, at present, silent.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HALO ELECTRONICS, INC.
Plaintiff-Appellant,

v.

PULSE ELECTRONICS, INC., PULSE ELECTRONICS CORPORATION,
Defendants-Appellees,

2013-1472, 2013-1656

Appeal from the United States District Court for the District of Nevada in No. 07-CV-0331, Judge Philip M. Pro.

O'MALLEY, *Circuit Judge*, with whom HUGHES, Circuit Judge, joins, dissenting from the denial of the petition for rehearing en banc.

For the reasons detailed in my concurrence at the panel stage—*Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 769 F.3d 1371, 1383–86 (Fed. Cir. 2014) (O'Malley, J., concurring)—and reiterated here, I believe the full court should hear this case en banc to reevaluate our jurisprudence governing an award of enhanced damages under 35 U.S.C. § 284. According-

ly, I dissent from the court's refusal to consider this matter en banc.

Our current two-prong, objective/subjective test for willful infringement, set out in In re Seagate Technology, LLC, 497 F.3d 1360 (Fed. Cir. 2007) (en banc) and further explained in *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007 (Fed. Cir. 2012), is analogous to the test this court proscribed for the award of attorneys' fees under § 285 in *Brooks Furniture Manufacturing, Inc. v. Dutailier International, Inc.*, 393 F.3d 1378, 1381–82 (Fed. Cir. 2005), *overruled by Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1757–58 (2014). The parallel between our tests for these two issues is not surprising. Both enhanced damages and attorneys' fees are authorized under similar provisions in title 35 of the United States Code (the Patent Act of 1952). Compare 35 U.S.C. § 284 ("[T]he court may increase the damages up to three times the amount found or assessed.") with 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party."). And, although § 284 does not limit enhanced damages to "exceptional cases" as does § 285 for attorneys' fees, the Supreme Court has explained that increased damages are only available "in a case of willful or bad-faith infringement." *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 508 (1964).[1]

---

[1] The Supreme Court has also explained that willfulness includes circumstances that qualify as recklessness—defined as a "high risk of harm, objectively assessed." *Safeco Ins. Co. of Am. v. Burr*, 551 U.S. 47, 70 (2007).

As such, our jurisprudence governing the award of enhanced damages under § 284 has closely mirrored our jurisprudence governing the award of attorneys' fees under § 285. See, e.g., *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007 (Fed. Cir. 2012) ("Our holding is consistent with similar holdings in other parallel areas of law. Our precedent regarding objectively baseless claims, which allow courts to award enhanced damages and attorneys' fees under 35 U.S.C. § 285, and the Supreme Court's precedent on 'sham' litigation are instructive."); *iLOR, LLC v. Google, Inc.*, 631 F.3d 1372, 1377 (Fed. Cir. 2011) ("The objective baselessness standard for enhanced damages and attorneys' fees against a non-prevailing plaintiff under Brooks Furniture is identical to the objective recklessness standard for enhanced damages and attorneys' fees against an accused infringer for § 284 willful infringement actions under [*Seagate*]."). Indeed, the structure for assessing willfulness set forth in Bard and our old § 285 Brooks Furniture test were both predicated on our interpretation of the Supreme Court's decision in *Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc. ("PRE")*, 508 U.S. 49 (1993), which we believed required a two-step objective/subjective inquiry before either enhanced damages or attorneys' fees could be awarded.

We have gone so far, moreover, to require that an evidentiary wall be erected between the objective and subjective portions of the inquiry. We preclude considerations of subjective bad faith—no matter how egregious—from informing our inquiry of the objective baselessness of a claim and preclude the weakness a claim or defense from being indicative of

a parties' subjective bad faith. *See, e.g., Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 687 F.3d 1300, 1315 (Fed. Cir. 2012) ("Because we conclude that Allcare's allegations of infringement of claim 52 were not objectively baseless, we need not reach the question of whether Allcare acted in subjective bad faith.") vacated, *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744 (2014); *Old Reliable Wholesale, Inc. v. Cornell Corp.*, 635 F.3d 539, 547 n.4 (Fed. Cir. 2011) ("When making a section 285 fee award, subjective considerations of bad faith are irrelevant if the challenged claims or defenses are not objectively baseless."); *iLOR*, 631 F.3d at 1380 ("From the statements, the district court inferred that iLOR must have known that Google did not infringe its patents. However, these statements are irrelevant to the issue of objective baselessness."). We now know that the artificial and awkward construct we had established for § 285 claims is not appropriate. We should assess whether the same is true with respect to the structure we continue to employ under § 284.

The Supreme Court has told us that our reading of PRE was wrong. In *Octane Fitness*, the Court explained that the *PRE* standard was crafted as a very narrow exception for "sham" litigation to avoid chilling the exercise of the First Amendment right to petition the government for redress of grievances with the threat of antitrust liability. This narrow test required that a "sham" litigation be "objectively baseless" and "brought in an attempt to thwart the competition." *Octane Fitness*, 134 S. Ct. at 1757 (citing *PRE*, 508 U.S. at 60–61). In rejecting Brooks Furniture's reliance on *PRE* in the § 285 context, the Supreme Court stated that the narrow *PRE* standard

"finds no roots in the text of § 285" and the chilling effect of shifting attorney's fees is not as great as the threat of antitrust liability. Id. at 1757–58.

Because we now know that we were reading *PRE* too broadly, and have been told to focus on the governing statutory authorization to determine what standards should govern an award of attorneys' fees, we should reconsider whether those same interpretative errors have led us astray in our application of the authority granted to district courts under § 284. Just as "the *PRE* standard finds no roots in the text of § 285," *id.*, there is nothing in the text of § 284 that justifies the use of the *PRE* narrow standard. In rejecting the rigid two-prong, subjective/objective test for § 285 under *Brooks Furniture*, moreover, the Supreme Court told us to employ a flexible totality of the circumstances test. Id. at 1756. And, it has told us that it is inappropriate to artificially constrict the evidence a court may consider in exercising its discretion under § 285. *Octane Fitness*, 134 S. Ct. at 1756 ("The Federal Circuit's formulation is overly rigid."). Because § 284 also places the inquiry squarely within a trial court's discretion, we should rethink the extent to which we are authorized to impose restrictions on the manner in which that discretion is exercised, outside the normal restrictions imposed by the Federal Rules of Evidence and application of the abuse of discretion standard. We should now assess whether a flexible test similar to what we have been told to apply in the § 285 context is also appropriate for an award of enhanced damages.

The rigid structure we require for assessing willfulness is not the only part of our willfulness jurisprudence that requires our attention. In *Octane Fitness*, the Supreme Court also rejected the re-

quirement that patent litigants establish their entitlement to attorneys' fees under § 285 by "clear and convincing evidence." *Id.* at 1758. As we used to do for attorneys' fees, we currently require patentees to prove willfulness by clear and convincing evidence. *See Seagate*, 497 F.3d at 1371. As the Supreme Court explained in *Octane Fitness*, however, the ordinary rule in civil cases, and specifically patent infringement cases, is proof by a preponderance of the evidence. *Herman & Mclean v. Huddleston*, 459 U.S. 375, 390 (1983); *see also Octane Fitness*, 134 S. Ct. at 1758 (citing *Bene v. Jeantet*, 129 U.S. 683, 688 (1889)). In fact, other courts only require proof of willfulness by a preponderance of the evidence in similar contexts. E.g., *Fishman Transducers, Inc. v. Paul*, 685 F.3d 187, 193 (1st Cir. 2012) (holding that a preponderance of the evidence standard was appropriate to prove willfulness in a trademark infringement case); *Columbia Pictures Indus., Inc. v. Liberty Cable, Inc.*, 919 F. Supp. 985 (S.D.N.Y. 1996) (explaining that plaintiff must prove willful copyright infringement by a preponderance of the evidence). As with § 285, § 284 has no statutory language that would justify a higher standard of proof; it just demands a simple discretionary inquiry and imposes no specific evidentiary burden. *See Octane Fitness*, 134 S. Ct. 1758. This court should evaluate whether there are reasons to maintain a standard that is at odds with the ordinary standard in civil cases for a finding of willfulness where nothing in the statutory text even hints that we do so. It is possible that, given the Supreme Court's guidance in *Aro* and *Safeco* regarding the type of showing necessary for a finding of willfulness, the clear and convincing evidence standard is appropriate under § 284

even though not similarly appropriate under § 285. If so, we should collectively make that determination only after careful consideration of *Octane Fitness*, however.

The Supreme Court also rejected de novo review of a fee award under § 285. *Highmark*, 134 S. Ct. at 1748. According to the Supreme Court, "whether a case is 'exceptional' under § 285 is a matter of discretion," which "is to be reviewed only for abuse of discretion." *Id.* Section 284 also leaves the issue of enhanced damages to the discretion of the court. Compare 35 U.S.C. § 284 ("[T]he court may increase the damages . . . ." (emphasis added)) with 35 U.S.C. § 285 ("The court in exceptional cases may award reasonable attorney fees to the prevailing party." (emphasis added)). Indeed, other appellate courts review similar willfulness findings with more deference. E.g., *Dolman v. Agee*, 157 F.3d 708, 714–15 (9th Cir. 1998) (reviewing a finding of willful copyright infringement for clear error). As such, we must also consider whether a district court's finding of willfulness should continue to be subject to de novo review.

Finally, under the plain language of §§ 284 and 285, "the court" is the entity that decides whether the remedy is appropriate. 35 U.S.C. § 284 *("[T]he court* may increase the damages . . . ." (emphasis added)); 35 U.S.C. § 285 ("*The court* in exceptional cases may award reasonable attorney fees to the prevailing party." (emphasis added)). While we allowed the court to determine whether to award attorneys' fees under *Brooks Furniture*, we have long held that a willfulness determination contains issues of fact that should be submitted to a jury. *See Bard*, 682 F.3d at 1005 (holding that the objective prong under

Seagate was ultimately a question of law for the court, but leaving the subjective prong as a question of fact for the jury); *see also Nat'l Presto Indus., Inc. v. West Bend Co.*, 76 F.3d 1185, 1193 (Fed. Cir. 1996) ("The issue of willful infringement remains with the trier of fact."); *Braun Inc. v. Dynamics Corp. of Am.*, 975 F.2d 815, 822 (Fed. Cir. 1992) ("Whether infringement is willful is a question of fact and the jury's determination as to willfulness is therefore reviewable under the substantial evidence standard." (citation omitted)). Although not directly addressed by the Supreme Court in either *Octane Fitness* or *Highmark*, when we reevaluate the proper standards for an award of enhanced damages, this court should also consider whether § 284 requires a decision on enhanced damages to be made *by the court*, rather than the jury. The mere presence of factual components in a discretionary inquiry does not remove that inquiry from the court to whom Congress reposed it. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 992 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996) ("Even within the realm of factual questions, whether a particular question must always go to a jury depends 'on whether the jury must shoulder this responsibility as necessary to preserve the substance of common law right of trial by jury.'" (quoting *Tull v. United States*, 481 U.S. 412, 417 (1987))); see also *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 401–02 (1990) (explaining that Rule 11 sanctions are to be determined by a judge even though "the Rule requires a court to consider issues rooted in factual determinations"); *Pierce v. Underwood*, 487 U.S. 552, 559 (1988) (concluding the language in the statute for awarding attorney's fees in the Equal Access to

Justice Act "emphasizes the fact that the determination is for the district court to make").

For the following reasons, I urge the full court to take this opportunity to reevaluate our § 284 jurisprudence in light of both the statutory text and the Supreme Court's recent decisions in *Highmark* and *Octane Fitness*.